#### THE

## CA.LCUTTA

# University Calendar,

1868-69.



### CALCUTTA:

THACKER, SPINKAND CO., PUBLISHERS TO THE CALCUTTA UNIVERSITY.

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## LIST OF ABBREVIATIONS.

Coll.	College.
Bar	Bareilly.
J. Nar	Joy Natain.
Gov	Covernment
Hol	Holiday
L. P	Lower Provinces
rres.	Presidency
La Mart	La Martiniere.

I.

## Calcutta University Calendar.

## 1868-69.

		MAY.
1 2	F S	,
3	\$	
4	М	
5	T	
$\frac{6}{7}$	W	
8	T F	
9	S	
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10	వ	
11 12	M T	
13	w	
14	T	
15	F	Vac. one month Gov. Coll. L. P.
16	S	
17	5	
18	M	
19	T	
20	W	
$\begin{array}{c c} 21 \\ 22 \end{array}$	T F	
23	S	
		0 77
24	\$	Queen Victoria born (1819.)
25	M	
26 27	T W	
28	T	
29	F	
30	S	Meeting of Syndicate.
31	3	

		JUNE.
1 2 3 4 5 6	M T W T F	
9 10 11 12 13	M T W T F S	
15 16 17 18 19 20	M T W T F S	Pres. Coll. estd. 1855.  Accession of Queen Victoria 1837.
22 22 24 25 26 27	M T W T F S	
29	M T	

		JULY.
1 2 3 4	W T F S	
6 7 8 9 10 11	M T W T F S	
13 14 15 16 17 18	E M T W T F S	University of Bombay founded 1857.
20 21 22 23 24 25	M T W T F S	Meeting of Syndicate.
27 28 29 30 31	M T W T F	

		AUGUST.
1	8	
2 3 4 5 6 7 8	S M T W T F S	
1.	Y T T T F S	Public Hol. L. P.
177 19 20 21 22	M T W T F S	Eclipse of the Sun
のなるないない	M T W T F	ttleeting of Dyndicate
31	Ñ	

		SEPTEMBER.
1 2 3 4 5	T W T F S	University of Madras founded 1857.
7 8 9 10 11 12	M T W T F S	
16 17 18 19	M T W T F S	Public Hol. L. P.
29 21 22 23 24 25	S M T W T	Durga Pujah Hol-begin.
28 28 29 30	S M T	flicting of Agndrete
30	W	

		OCTOBER.
1 2 3	T F S	
f 5 6 7 8 9	± M T W T F S	
11 12 13 14 15 16 17	× M T W T F S	
15 19 20 21 22 23 24	Š M T W T F S	Public Hol. L. P.
25 26 27 29 30 31	M T W T F S	Meeting of Syndicate,

		NOVEMBER.
1 2 3 4 5 6 7	S M T W T F S	Last day of application for Ent. and First Ans Exam.
9 10 11 12 13 14	XM TW TFS	
15 16 17 18 19 20 21	ã M T W T F S	
22 23 24 25 25 27 28	S M T W T F S	Meeting of Syndicate:
29 30	S M	Ent. and First Arts Exam begin.

		DECEMBER.
1 2 3 4 5	T W T F S	
7 8 9 10 11 12	S M T W T F S	Last day of application for B A. B L & L. Evam.
15 14 15 16 17 18 19	M T W T F S	
20 21 22 23 24 25 26	S M T W T F S	Meeting of Ent. and First Arts Examiners. Thustmas Day. Meeting of Syndicate,
27 28 29 30 31	S M T W T	B. A., B. L. & L. L. Exam. begin.  Last day of application for Honors.

TANTTADV							
	JANUARY.						
$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$	F S	New Year's day.					
3 4 5 6 7 8 9	S M T W T F S						
11 12 13 14 15 16	M T W T F S						
17 18 19 20 21 22 23	SM TW TFS	University of Calcutta founded 1857.					
24 25 26 27 28 29 30	M T W T F S	Meeting of B. A. Examiners.  Public Hol. L. P.  Meeting of Syndicate.					
31	\$	·					

## 14 CALCUTTA UNIVERSITY ALMANAC.—1868-69.

	FEBRUARY.					
1 2 3 4 5 6	M T W T F S	Hon. Exam. in Arts				
7 8 9 10 11 12 13	* M T W T F S					
15 16 17 18 19 20	3 M T W T F S					
21 22 23 24 25 26 27	S M T W T F S	Meeting of Syndicate.				
28	3k					

		MARCII.
1 2 3 4 5 6	M T W T F S	Last day of notice for M. D. Cand.  Convocation for conferring Degrees.
8 9 10 11 12 13	ã M T W T F S	
14 15 16 17 18 19 20	S M T W T F S	
21 22 23 24 25 26 27	M T W T.F S	Meeting of Syndicate,
28 29 30 31	& M T W	·

		APRIL.	
1 2 3	T F S		
$\begin{bmatrix} 6 \\ 6 \\ 7 \\ 8 \\ 9 \\ 10 \end{bmatrix}$	M T W T F S		
11 12 13 14 15 16 17	M T W T F S		
18 19 20 21 22 23 24	M T W T F S		
25 26 27 28 29 30 31	M T W T F S	Meeting of Syndicate.	

## II.

## ACT OF INCORPORATION.

ACT NO. II. of 1857.

Passed on the 24th January, 1857.

#### -----

An Act to establish and incorporate an University at Calcutta.

Whereas, for the better encouragement of Her Preamble. Majesty's subjects of all classes and denominations within the Presidency of Fort William in Bengal and other parts of India in the pursuit of a regular and liberal course of education, it has been determined to establish an University at Calcutta, for the purpose of ascertaining by means of examination the persons who have acquired proficiency in different branches of Literature, Science and Art, and of rewarding them by Academical Degrees, as evidence of their respective attainments, and marks of honor proportioned thereunto; and whereas, for effectuating the purposes aforesaid, it is expedient that

such University should be incorporated: It is enacted as follows: (that is to say)—

The Right Honorable Charles John Viscount Canning,

Governor-General of India,

The Honorable John Russell Colvin, Lieutenant-Governor of the North-Western Provinces,

The Honorable Frederick James Halliday, Lieutenant-Governor of Bengal,

The Honorable Sir James William Colvile, Knight, Chief Justice of the Supreme Court of Judicature in Bengal,

The Right Reverend Daniel Wilson, Doctor of Divinity, Bishop of Calcutta,

The Honorable George Anson, General, Commander-in-Chief of the Forces in India,

The Honorable Joseph Alexander Dorin, Member of the Supreme Council of India,

The Honorable John Low, Major-General, Companion of the Most Honorable Order of the Baun, Member of the Supreme Council of India,

> The Honorable John Peter Grant, Member of the Supreme Council of India,

The Honorable Barnes Peacock, Member of the Supreme Council of India, CHARLES ALLEN, Esquire,
Member of the Legislative Council of India,

HENRY RICKETTS, Esquire,
Provisional Member of the Supreme Council of India,

CHARLES BINNY TREVOR, Esquire, Judge of the Sudder Court in Bengal,

Prince GHOLAM MUHAMMUD,

WILLIAM RITCHIE, Esquire, Advocate-General in Bengal,

CECIL BEADON, Esquire, Secretary to the Government of India,

Colonel Henry Goodwyn, of the Bengal Engineers, Chief Engineer in Bengal,

> WILLIAM GORDON YOUNG, Esquire, Director of Public Instruction in Bengal,

Lieutenant-Colonel WILLIAM ERSKINE BAKER, of the Bengal Engineers, Secretary to the Government of India,

Lieutenant-Colonel Andrew Scott Waugh, of the Bengal Engineers, Surveyor-General of India,

> KENNETH MACKINNON, Esquire, Doctor in Medicine,

HODGSON PRATT, Esquire, Inspector of Schools in Bengal, HENRY WALKER, Esquire,
Professor of Anatomy and Physiology in the Medical
College of Bengal,

THOMAS THOMSON, Esquire,
Doctor in Medicine, Superintendent of the Botanical
Garden at Calcutta,

Frederick John Mouat, Esquire,
Doctor in Medicine, and Fellow of the Royal College
of Surgeons,

Lieutenant William Nassau Lees, of the Bengal Infantry,

The Reverend WILLIAM KAY,
Doctor of Divinity,
Principal of Bishop's College,

The Reverend Alexander Duff,
Doctor of Divinity,

THOMAS OLDHAM, Esquire, Superintendent of the Geological Survey of India,

Henry Woodrow, Esquire, Inspector of Schools in Bengal,

LEONIDAS CLINT, Esquire, Principal of the Presidency College,

Prosonno Coomar Tagore, Clerk, Assistant of the Legislative Council of India,

RAMPERSHAD Roy,
Government Pleader in the Sudder Court of Bengal,
The Reverend James Ogilvie,
Master of Arts,

The Reverend Joseph Mullens, Bachelor of Arts,

Moulavy Muhammud Wujeeh, Principal of the Calcutta Mudrasah,

Ishwar Chundra Bidya Sagur, Principal of the Sanskrit College of Calcutta,

RAMGOPAL GHOSE,

Formerly member of the Council of Education,

ALEXANDER GRANT, Esquire, Apothecary to the East India Company,

HENRY STEWART REID, Esquire,
Director of Public Instruction in the North-Western
Provinces,

being the first Chancellor, Vice-Chancellor, and Fellows of the said University, and all the persons who may hereafter become or be appointed to be Chancellor, Vice-Chancellor, or Fellows as hereafter mentioned, so long as they shall continue to be such Chancellor, Vice-Chancellor, or Fellows, are hereby constituted and declared to be one Body Politic and Corporate by the name of the University of Calcutta; and such Body Politic shall by such name have perpetual succession, and shall have a common seal, and by such name shall sue and be sued, implead and be impleaded and answer and be answered unto, in every Court of Justice within the territories in the possession and under the Government of the East India Company.

II. The said Body Corporate shall be able and

Power to hold and discapable in law to take, purpose of property.

chase, and hold any property,

moveable or immoveable, which may become vested in it for the purpose of the said University by virtue of any purchase, grant, testamentary disposition, or otherwise; and shall be able and capable in law to grant, demise, alien, or otherwise dispose of, all or any of the property, moveable or immoveable, belonging to the said University; and also to do all other matters incidental or appertaining to a Body Corporate.

- Constitution of body Chancellor, one Vice-Chancellor, and such number of ex-officio and other Fellows as the Governor-General of India in Council hath already appointed, or shall from time to time, by any order published in the Calcutta Gazette, hereafter appoint; and the Chancellor, Vice-Chancellor, and Fellows for the time being shall constitute the Senate of the said University. Provided that, if any person being Chancellor, Vice-Chancellor, or Fellow of the said University, shall leave India without the intention of returning thereto, his office shall thereupon become vacant.
- 1V. The Governor-General of India for the time

  Chancellor.

  being shall be the Chancellor of the said University, and the first Chancellor shall be the Right Honorable Charles John Viscount Canning.
- V. The first Vice-Chancellor of the said Univervice-Chancellor. sity shall be Sir James William
  Colvile, Knight. The office of Vice-Chancellor shall
  be held for two years only; and the Vice-Chancellor
  hereinbefore nominated shall go out of office on the

first day of January, 1859. Whenever a vacancy shall occur in the office of Vice-Chancellor of the said University by death, resignation, departure from India, effluxion of time, or otherwise, the Governor-General of India in Council shall, by notification in the Calcutta Gazette, nominate a fit and proper person, being one of the Fellows of the said University, to be Vice-Chancellor in the room of the person occasioning such vacancy. Provided that on any vacancy in the said office which shall occur by effluxion of time, the Governor-General of India in Council shall have power to re-appoint the Vice-Chancellor hereinbefore nominated or any future Vice-Chancellor to such office.

VI. The Lieutenant-Governors of Bengal and the North-Western Provinces, the Fellows. Chief Justice of the Supreme Court of Judicature at Fort William in Bengal or of any Court of Judicature hereafter to be constituted to or in which the powers of the said Supreme Court may be transferred or vested, the Bishop of Calcutta and the Members of the Supreme Council of India, all for the time being, shall be ex-officio Fellows of the said University. whole number of the Fellows of the said University, exclusive of the Chancellor and Vice-Chancellor for the time being, shall never be less than thirty; and whenever the number of the said Fellows, exclusive as aforesaid, shall by death, resignation, departure from India, or otherwise, be reduced below thirty, the Governor-General of India in Council shall forthwith, by notification in the Calcutta Gazette, nominate so many fit and proper persons to be Fellows of the said

University as, with the then Fellows of the said University, shall make the number of such Fellows, exclusive as aforesaid, thirty. But nothing herein contained shall prevent the Governor-General of India in Council from nominating more than thirty persons to be Fellows of the said University, if he shall see fit.

VII. The Governor-General of India in Council

The appointment of may cancel the appointment of any person already appointed, or hereafter to be appointed a Fellow of the University, and a soon as such order is notified in the Gazette, the person so appointed shall cease to be a Fellow.

VIII. The Chancellor, Vice-Chancellor, and Fel-

Chancellor, Vice-Chancellor, and Fellows to superintend the affairs of the University.

lows for the time being shall have the entire management of and superintendence over the affairs, concerns and property

of the said University; and in all cases unprovided for by this Act, it shall be lawful for the Chancellor, Vice-Chancellor, and Fellows to act in such manner as shall appear to them best calculated to promote the purposes Bye-Laws. intended by the said University.

The said Chancellor, Vice-Chancellor, and Fellows shall have full power from time to time to make and alter any bye-laws and regulations (so as the same be not repugnant to law or to the general objects and provisions of this Act), touching the examination for degrees and the granting of the same; and touching the examination for honors and the granting of marks of honor for a higher proficiency in the different branches of Literature, Science, and Art; and touching

the qualifications of the candidates for degrees and the previous course of instruction to be followed by them, and the preliminary examinations to be submitted to by them; and touching the mode and time of convening the meetings of the Chancellor, Vice-Chancellor, and Fellows; and, in general, touching all other matters whatever regarding the said University. And all such bye-laws and regulations, when reduced into writing, and after the common seal of the said University shall have been affixed thereto, shall be binding upon all persons, members of the said University, and all candidates for degrees to be conferred by the same, provided such bye-laws and regulations shall have been first submitted to and shall have received the approval of the Governor-General of India in Council.

IX. All questions which shall come before the Chan-Meetings of the Se. cellor, Vice-Chancellor, and Fellows shall be decided at a nate. meeting of the Senate by the majority of the members present; and the Chairman at any such meeting shall have a vote, and, in case of an equality of votes, a second or casting vote. No question shall be decided at any meeting, unless the Chancellor, or Vice-Chancellor, and five Fellows, or, in the absence of the Chancellor and Vice-Chancellor, unless six Fellows at the least, shall be present at the time of the decision. At every meeting of the Senate, the Chancellor, or in his absence the Vice-Chancellor, shall preside as Chairman; and, in the absence of both, a Chairman shall be chosen by the Fellows present, or the major part of them.

X. The said Chancellor, Vice-Chancellor, and Fel-

Appointment and removal of Examiners and Officers.

lows for the time being shall have full power from time to time to appoint, and as they remove all Examiners. Officers.

shall see occasion, to remove all Examiners, Officers, and servants of the said University.

AI. The said Chancellor, Vice-Chancellor, and FelPower to confer degrees.

lows, shall have power, after examination, to confer the several degrees of Bachelor of Arts, Master of Arts, Bachelor of Laws, Licentiate of Medicine, Doctor of Medicine, and Master of Civil Engineering; they shall also have power, after examination, to confer upon the candidates for the said several degrees, marks of honor for a high degree of proficiency in the different branches of Literature, Science and Art, according to rules to be determined by the bye-laws to be from time to time made by them under the power in that behalf given to them by this Act.

XII. Except by special order of the Senate, no person

Qualification for admission of Candidates for de-

shall be admitted as a candidate for the degree of Bachelor of Arts, Master of Arts, Bache-

lor of Laws, Licentiate of Medicine, Doctor of Medicine, or Master of Civil Engineering, unless he shall present to the said Chancellor, Vice-Chancellor, and Fellows, a certificate from one of the Institutions authorized in that behalf by the Governor-General of India in Council, to the effect that he has completed the course of instruction prescribed by the Chancellor, Vice-Chancellor, and Fellows of the said University, in the

bye-laws to be made by them under the power in that behalf given by this Act.

The said Chancellor, Vice-Chancellor, and Fellows shall cause an exade-Examination for mination for degrees to be held grees. at least once in every year; on every such examination the candidates shall be examined either by Examiners appointed for the purpose from among the Fellows by the said Chancellor, Vice-Chancellor, and Fellows, or by other Examiners so to be appointed; and on every such examination, the candidates, whether candidates for an ordinary degree or for a degree with honors. shall be examined on as many subjects and in such manner as the said Chancellor, Vice-Chancellor, and Fellows shall appoint.

XIV. At the conclusion of every examination of Grant of degrees. the candidates, the Examiners shall declare the name of every candidate whom they shall have deemed entitled to any of the said degrees, and his proficiency in relation to other candidates; and also the honors which he may have gained in respect of his proficiency in that department of knowledge in which he is about to graduate; and he shall receive from the said Chancellor a certificate, under the seal of the University of Calcutta and signed by the said Chancellor or Vice-Chancellor, in which the particulars so stated shall be declared.

XV. The said Chancellor, Vice-Chancellor, and Fees. Fellows shall have power to charge such reasonable fees for the degrees to be conferred by them, and upon admission into the said

University and for continuance therein, as they, with the approbation of the Governor-General of India in Council, shall from time to time see fit to impose. Such fees shall be carried to one General Fee Fund for the payment of expenses of the said University, under the directions and regulations of the Governor-General of India in Council, to whom the accounts of Annual Accounts.

income and expenditure of the said University shall once in every year be submitted for such examination and audit as the said Governor-General of India in Council may direct.

## ACT No. XLVII. of 1860.

Passed on the 6th October, 1860.

An Act for giving to the Universities of Calculta, Madras, and Bombay the power of conferring Degrees in addition to those mentioned in Acts II., XXII. and XXVII. of 1857.

Whereas it is expedient to give to the Universities Prenable. of Calcutta, Madras, and Bombay established under Acts II., XXII. and XXVII. of 1857, the power of conferring Degrees other than the Degrees in that Act expressly provided for: It is enacted as follows:—

I. It shall be competent to the Chancellor, Vice-Power of Universities to Chancellor, and Fellows of the Universities of Calcutta, Madras or Bombay respectively, to confer such Degrees and to grant such Diplomas or Licenses in respect of De-

grees, as the said Chancellor, Vice-Chancellor, and Fellows of any such University shall have appointed or shall appoint by any Bye-laws or Regulations made and passed or to be made or passed by them in the manner provided in the said Acts and submitted to and approved by the Governor-General in Council as far as regards the University of Calcutta, or by the Governor in Council of Madras or Bombay as regards the Universities of Madras and Bombay respectively.

II. All the provisions contained in the said Acts Construction.

II. XXII. and XXVII. of 1857, with respect to the Degrees therein mentioned and to the examinations for those Degrees, shall apply to any Degrees which may be conferred under this Act and to the examinations for such Degrees.

## III.

### BYE-LAWS.

#### ----

#### THE SENATE.

- 1. The Senate\* as constituted by Act No. II. of 1857, shall meet ordinarily once a year, on the third Saturday in† April, and at other times when convened by the Vice-Chancellor.
- 2. The Vice-Chancellor shall convene a meeting of the Senate on the requisition of any six of the Members.
- 3. Nine Members of the Senate shall constitute a quorum, and all questions shall be decided by a majority of the votes of the Members present.

#### THE FACULTIES.

- 1. The Senate shall be divided into four Faculties, namely, Arts, Law, Medicine, and Engineering. Every Member of the Senate shall be a Member of one Faculty at least, and any Member of the Senate may be a Member of more than one Faculty.
- 2. The Faculties shall be appointed by the Senate at its Annual Meeting.
- 3. Each Faculty shall elect its own President. Every Meeting of a Faculty shall be convened by its President, or, in his absence, by the Scnior Fellow belonging to that Faculty.

† The Syndicate have power to alter all dates.

<sup>\*</sup> By the 8th Section of Act No. II. of 1857, the Senate have power to make and alter Bye-laws and Regulations, subject to the approval of the Governor-General of India in Council.

- 4. If any Faculty omit to elect a President before the Annual Meeting of the Senate, or, in case the office should become vacant during the year, to elect a President for the rest of the year, within one month after the vacancy occurs, the Vice-Chancellor may appoint any Member of such Faculty to be its President.
- 5. Three Members of any Faculty shall constitute a quorum of that Faculty.

#### THE SYNDICATE.

1. The Executive Government of the University shall be vested in a Syndicate, consisting of the Vice-Chancellor and six of the Fellows, who shall be elected for one year by the several Faculties, in the following proportions:—

Three by the Faculty of Arts.

One by the Faculty of Law.

One by the Faculty of Medicine.

One by the Faculty of Engineering.

- 2. The elections both of the Presidents of the Faculties and of the Members of the Syndicate shall take place before the Annual Meeting of the Senate, and the names of the persons elected shall be declared at such Meeting.
- 3. The Syndicate shall meet ordinarily once a month, and at other times when convened by the Vice-Chancellor.
- 4. All Members of the Syndicate must be resident in or near Calcutta. If any Member be temporarily

absent from Calcutta, the President of his Faculty may appoint a Member to officiate during his absence. Should the period of absence exceed three months, the Vice-Chancellor may declare his place vacant.

- 5. On every vacancy in the Syndicate, caused by death, resignation, absence from Calcutta, or otherwise, the Faculty, by whom the Member causing the vacancy was elected, shall proceed to elect a new Member for the remainder of the current year.
- 6. If any Faculty omit to elect a Member of the Syndicate within one month after a vacancy occurs, the Vice-Chancellor may appoint one from among the Members of that Faculty.
- 7. Four Members of the Syndicate shall constitute a quorum, and all questions shall be decided by a majority of the votes of the Members present.
- 8. The Vice-Chancellor, or, in his absence, the Senior\* Fellow present shall preside at all Meetings of the Syndicate, and if the votes, including that of the President, are equally divided, the President shall have a casting vote.
- 9. It shall be the duty of the Syndicate to appoint, and if necessary, to remove the Examiners and all other Officers of the University, except the Registrar; to order Examinations in conformity with the Regulations, and to fix the times at which they shall be held; to grant Degrees, Honors, and Rewards; to keep the

The ex-officio Fellows of the University are always the Senior Fellows in order of official precedence. The seniority of the other Fellows mentioned in the Act of Incorporation is according to the order in which their names appear there. The seniority of all other Fellows is according to the date and order of their appointment.

Accounts of the University, and to correspond on the business of the University with the Government and all other authorities and persons.

- 10. During the year, between the Annual Meetings of the Senate, the Syndicate may appoint any Member of the Senate to any one or more of the Faculties, and may transfer any Member from one Faculty to another.
- 11. The Syndicate shall from time to time frame such Bye-laws and Regulations as may be necessary, subject to the approval of the Senate. Each Faculty shall report on any subject that may be referred to it by the Syndicate.
- 12. Any Faculty, or any Member, or number of Members of the Senate, may make any recommendation to the Syndicate, and may propose any Bye-law or Regulation for the consideration of the Syndicate.
- 13. The decision of the Syndicate on any such recommendation or proposition, or any matter whatever, may be brought before the Senate by any Member of the Senate at one of its Meetings, and the Senate may approve, revise, or modify any such decision, or may direct the Syndicate to review it.
- 14. No question shall be considered by the Senate that has not, in the first instance, been considered and decided on by the Syndicate.

#### THE REGISTRAR.

1. The Registrar shall be appointed by the Senate at the Annual Meeting. He shall be appointed for two years only, but at the end of every such term he may

be re-appointed. The term of office of the Registrar commence on the 1st day of May next following If a vacancy occur in the office of Registrar between two Annual Meetings of the Senate, the Syndicate shall appoint a person to officiate until the next first day of May.

- It shall be competent to the Syndicate at their discretion, to grant leave of absence for short periods to the Registrar, when such leave can be granted without public inconvenience or extra expense. It shall also be competent to the Syndicate once during the Registrar's two years' tenure of office to grant him leave of absence on Medical Certificate, without forfeiture of salary, for a period not exceeding three months: provided that a satisfactory arrangement can be made without extra expense for the discharge of the Registrar's duties during his absence. Should it be necessary for the Registrar, after enjoying one such leave of absence, to be absent a second time (otherwise than for a short period as already provided,) or should it be necessary for the Registrar at any time to be absent for more than three months, or to proceed to Europe, the office of Registrar shall thereupon become vacant.
- 3. The Registrar shall be the custodian of the Records, Library, Common Seal, and such other property of the University as the Syndicate shall commit to his charge.
- 4. All Meetings of the Senate, the Syndicate, and the Faculties, shall be convened through the Registrar, who shall keep a record of the proceedings of such Meetings.

IV.
REGULATIONS.

ARTS.

ENTRANCE EXAMINATION.

- 1. The Entrance Examination shall commence annually on the first Monday in December, and shall be held in Calcutta and in such other places\* as shall from time to time be appointed by the Syndicate.
- 2. Any person, wherever he shall have been educated, may be admitted to the Entrance Examination, if he be above the age of sixteen years and not otherwise.
- 3. Every candidate for admission to the Entrance Examination shall send his application, with a certificate in the form entered in Appendix A., either to the Registrar or to a local officer recognised by the Syndicate. Every such application must reach the office of the Registrar at least fourteen days before the date fixed for the commencement of the Examination.
- 4. A fee of ten rupecs shall be payable by each candidate. No candidate shall be admitted, unless he shall have paid this fee to the Registrar or to a local

\*The following places have already been appointed:—
Hooghly, Berhampore, Kishnaghur, Dacca, Chittagong, Gowhatty,
Sylhet, Cuttack, Bhagulpore, Patna, Bancoorah, Benares, Agra, Deihi,
Bareilly, Ajmere, Lahore, Saugor, Lucknow, Colombo, Kandy, Burrisaul,
Simla, Mooltan, Peshawur, Daijeeling, Nagpore, Ranchee.

officer recognised by the Syndicate. A candidate who fails to pass or to present himself for the Examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent Entrance Examinations on payment of a like fee of ten Rupees on each occasion.

- 5. The Entrance Examination shall be conducted by means of printed papers, the same papers being used at every place at which the Examination is held.
- 6. At the Entrance Examination, every candidate shall be examined in the following subjects:—

#### I. LANGUAGES.

English; and one of the following languages:-

Greek.	Bengali.
Latin.	Oorya.
Arabic.	Hindi.
Persian.	Urdu.
Hebrew.	Burmese.
Sanskrit.	Armenian.

Any other language may be added to this list by the Syndicate. Sentences in each language in which the candidate is examined shall be given for translation into the other language.

The papers in each language shall include questions on Grammar and Idiom.

#### II. HISTORY.

The outlines of Ancient History, of the History of India, and of General Geography, with a more detailed knowledge of the Geography of India.

The Historical text-books will be fixed from time to time by the Syndicate. (See Appendix B.)

## III. MATHEMATICS.

#### Arithmetic.

The four Simple Rules; Vulgar and Decimal Fractions; Reduction; Practice; Proportion; Simple Interest; Extraction of Square Root.

#### Algebra.

The four Simple Rules; Proportion; Simple Equations; Extraction of Square Root; Greatest Common Measure; Least Common Multiple.

#### Geometry.

The first four books of Enclid, with easy deductions.

7. On the morning of the fourth Monday after the Examination, the Syndicate shall publish a list of the candidates who have passed, arranged in three Divisions, each in alphabetical order. Every successful candidate shall receive a certificate in the form entered in Appendix  $\Lambda$ .

# FIRST EXAMINATION IN ARTS.

- 1. The First Examination in Arts shall commence annually on the first Monday in December; and shall be held in Calcutta, and in such other places\* as shall from time to time be appointed by the Syndicate.
- 2. Any under-graduate of the University may be admitted to this Examination, provided he has prosecuted a regular course of study in any affiliated institution for not less than two academical years after passing the Entrance Examination.†
- 3. Every candidate for admission shall send his application, with a certificate in the form entered in Appendix A., either to the Registrar or to a local officer recognised by the Syndicate. Every such application must reach the office of the Registrar at least fourteen

The following places have already been appointed:—
Hooghly, Berhamporo, Kishnaghur, Dacca, Patna, Benares, Agra, Jelhi, Bareilly, Ajmere, Lahore, Colombo, Saugor, Simla, Darjeeling.
† The Syndicate have power to make exceptions to this rule in avor of Deputy Inspectors of Schools and Schoolmasters.

days before the date fixed for the commencement of the Examination.

- 4. A fee of twenty Rupees shall be payable by each candidate. No candidate shall be admitted, unless he shall have paid this fee to the Registrar or to the local officer recognised by the Syndicate. A candidate who fails to pass or to present himself for Examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to any one or more subsequent First Examinations in Arts, on payment of a like fee of twenty Rupees on each occasion.
- 5. The First Examination in Arts shall be conducted by means of printed papers, the same papers being used at every place at which the Examination is held.
- 6. At the First Examination in Arts, every candidate shall be examined in the following subjects:—

#### I. LANGUAGES

English; and one of the following languages:-

Greek.

Hebrew.

Latin,

Arabic.

Sanskrit.

Any other classical language may be added to this list by the Syndicate. Sentences in each language in which the candidate is examined, shall be given for translation into the other language.

The papers in each language shall include questions on Grammar and Idiom.

### II. HISTORY.

The History of England.

The text-book will be fixed from time to time by the Syndicate. (See Appendix B.)

The Historical questions shall include questions relating to the geography of the countries to which they refer.

\* The Examination in Languages will be such as to test a lower degree of competency than what is required for the B. A. Degree.

### III. MATHEMATTICS-PURE AND MIXED.

Arthmetic.

Algebra.

(The following in addition to the subjects at Entrance.)

Quadratic Equations; Proportion and Variation; Permutations and Combinations; Arithmetical and Geometrical Progressions; the Binomial Theorem; Simple and Compound Interest; Discount; Annuities; the nature and use of Logarithms.

Grometry.

(The following in addition to the subjects at Entrance.)

The sixth book of Euchd; the eleventh book to Prop. XXI.; deductions.

Plane Trigonometry as far as the Solution of Triangles.

Mechanics.

Composition and Resolution of Forces; Equilibrium of Forces at a point in one plane; the Mechanical Powers; and Centre of Gravity.

IV. MENTAL AND MORAL PHILOSOPHY.

Mental Philosophy as in Abercrombie on the Intellectual Powers. Moral Philosophy as in Abercrombie on the Moral Feelings.

7. On the morning of the fourth Monday after the Examination, the Syndicate shall publish a list of the candidates who have passed, arranged in three divisions, the first in order of merit, and the second and third in alphabetical order. Every candidate shall on passing receive a certificate in the form entered in Appendix A.

# BACHELOR OF ARTS.

- 1. An Examination for the Degree of B. A. shall be held annually in Calcutta and shall commence in the first week in January.
- 2. Any under-graduate of the University may be admitted to the Examination, provided he has prose-

cuted a regular course of study in any affiliated institution for not less than two academical years after passing the First Examination in Arts.\*

- 3. Every candidate for admission to the Examintion shall send his application, with a certificate in the form entered in Appendix A., to the Registrar at least fourteen days before the date fixed for the commencement of the Examination.
- 4. A fee of thirty Rupees shall be payable by each candidate. No candidate shall be admitted, unless he shall have paid this fee to the Registrar. A candidate who fails to pass or present himself for Examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent Examinations for the Degree of B. A. on payment of a like fee of thirty Rupees on each occasion.
- 5. The Examination for the Degree of B. A. shall be conducted by means of printed papers.
- 6. At the Examination for the Degree of B. A. every candidate shall be examined in the following subjects:—

### I. LANGUAGES.

English; and one of the following languages:-

Greek.

Hebrew.

Latin.

Arabic.

Sanskrit.

Any other classical language may be added to this list by the Syndicate.

Passages in each of the languages in which a candidate is examined, shall be given for translation into the other language.

The Syndicate have power to make exceptions to this rule in favour of Deputy Inspectors of Schools and School-masters.

#### II. HISTORY.

India during the Hindu, Mahomedan, and British periods, down to 1835. Greece, to the death of Alexander. Rome, to the death of Augustus. The Jews, to the destruction of Jerusalem.

The Historical text-books will be fixed from time to time by the Syndicate. (See Appendix B.)

#### III. MATHEMATICS-PURE AND MIXED.

Mechanics.

The General Laws of Motion; the motion of a falling body in free space and along an inclined plane.

Hydrostatics, Hydraulics, and Pneumatics.

Elementary propositions respecting the nature, transmission and intensity of fluid pressure; the condition of equilibrium of floating bodies; nature and simple properties of clastic fluids, and the pressure produced by them; Specific gravity and the modes of determining it; the Barometer; Air-pump; Common pump; Forcing pump; Siphon; Diving-bell; Thermometer.

### Astronomy.

Descriptive (as distinguished from Practical and Physical) Astronomy; the Solar System; Phenomena of Echpses.

- 1V. MENTAL AND MORAL PHILOSOPHY AND THE ELEMENTS OF LOGIC.

  The text-books will be named from time to time by the Syndicate.

  (See Appendix B.)
- V. ONE OF THE FOLLOWING SUBJECTS, TO BE SELECTED BY THE CANDIDATE.
  - (a.) Mathematics-Pure and Mixed.

Geometry.

Conic Sections, treated geometrically,

Optics.

Laws of Reflection and Refraction; reflection a reflection at spherical mirrors; and refraction through lenses, the incident pencils being direct; separation of Solar light into rays of different colours; description of Solar spectrum; rainbow; description of the eye; the Astronomical Telescope; Galileo's Telescope; the Sextant.

(b) Elements of Inorganic Chemistry and of Electricity.

### Thermotics, Chemistry, Electricity.

Molecular constitution of matter; Boscovich's Theory; cohesion; porosity; specific gravity; elasticity; adhesion; crystallization. Thermotics:—sensible heat; expansion; the Thermometer and Pyrometer radiation; conduction; convection; specific heat; physical states of matter and latent heat; theory of formation of dew and clouds; mechanical equivalent of heat: dynamic theory of keat. Chemistry:—laws of combining proportion; laws of Atomic Volumes; Atomic theory; chemical symbols and equivalents; Inorganic chemistry of the chief elements. Electricity:—polarity; induction; the Leyden Jar and Electrometer; conduction; the Lightning rod; the voltaic pile and battery; Magnetism and Electro-Magnetism; the Thermoelectric pile; relations of chemistry, heat, and electricity.

- (c.) Elements of Zoology and Comparative Physiology. The text book to be fixed by the Syndicate.
- (d.) Geology and Physical Geography.

### Geology.

Inorganic — Form and density of the earth and average density of superficial crust; observed ratio of increase of temperature with depth; physical state of interior as indicated by astronomical observation; how modified by temperature and pressure; principal chemical elements and compounds in earth's crust; chemical operations of interior; chemical phenomena of volcanoes, hot springs and crystalline tocks; dynamical operations of interior; phenomena of earthquakes, volcanoes, upheaval, depression, dislocation, and contoution of crust; chemical and inchanical processes at surface; constitution of atmospheric; its changes and their influence on the solid crust; phenomena of atmospheric disintegration and degradation of rocks; transport by water, ice, &c.; river, glacier and iceberg phenomena; formation of sedimentary rocks and their chief varieties, consolidation and metamorphism.

Organic.—Chemical constitution and structure of animals and plants; vital functions, and sources of vital action; geographical and bathymetric distribution; conditions of life and interdependence of organized beings; chemico-geological processes of preservation and formation of rock masses; coral reefs, limestone, coal, peat, &c.; metamorphism of organic rocks; comparative value of geological evidence of fessil remains; succession of life in past epochs; antiquity of existing animals and plants.

7. On the morning of the fourth Monday after the Examination, the Syndicate shall publish a list of the candidates who have passed, arranged in three Divisions, the first in order of merit, and the second and third in alphabetical order.

## HONORS IN ARTS.

- 1. Examinations for Honors in Arts shalf be held annually in Calcutta, commencing in the first week in February.
- 2. Any candidate who passes the B. A. Examination within four academical years from the date of his passing the Entrance Examination, may at the Honor Examination next ensuing, or at that of the following year, be examined for Honors in one or more of the following branches:—
  - (1.) Languages.
  - (2.) History.
  - (3.) Mental and Moral Philosophy.
  - (4.) Mathematics—pure and mixed.
  - (5.) Natural and Physical Science.
- 3. A fee of Rs. 50 shall be payable by each candidate. No candidate shall be admitted, unless he shall have paid this fee to the Registrar. A candidate, who fails to pass or present himself for Examination, shall not be entitled to claim a refund of the fee.
- 4. Every candidate for Honors shall intimate to the Registrar the subject or subjects in which he desires to be examined. Such intimation must reach the office of the Registrar on or before the 31st day of December.

5. Honors in Languages shall be awarded in Latin, in Greek, in Sanscrit, in Arabic, in Hebrew, and also in English for candidates whose vernacular language is not English.

The subjects in languages shall be selected by the Syndicate two years before the Examination.

The Examination shall include translation into English from the language professed by the candidate, and into that Language from English.

It shall also include written answers by the candidate in English to questions relating to the books selected for the Examination.

It shall also include questions on Comparative Grammar, with special reference to the language professed by the candidate.

Every candidate shall be required to write an Essay in English on a subject connected with the History or Literature of the language professed by him.

- 6. Candidates for Honors in History shall be examined in the following subjects:—
- a. History of a stated period (in modern times,) including political and personal events, manners, and literature.
  - b. Constitutional History of England (as in Hallam).
  - c. History of Modern Civilization (as in Guizot).
  - d. Political Economy.
  - e. Taylor's Historical Evidence.

The Examination in History shall include such questions on Geography and Ethnography as the subjects suggest. The candidates shall be required to write an Essay in English on an historical subject.

7. Candidates for Honors in Mathematics shall be examined in the following subjects:—

Algebra, including the Theory of Equations.

Analytical Geometry (Plane and Solid).

Differential and Integral Calculus.

Spherical Trigonometry.

Statics.

Dynamics.

Hydrostatics, Hydraulics, and Pneumatics. Optics.

Astronomy.

8. Candidates for Honors in Natural and Physical Science shall be examined in the following subjects:—

Chemistry (Organic and Inorganic); Electricity.

Also one of the following:

- a. Botany, Zoology, and Comparative Physiology.
- b. Geology, Mineralogy and Physical Geography.
- 9. Candidates for Honors in Mental and Moral Philosophy shall be examined in the following subjects:—

Logic.

Mental Philosophy.

Moral Philosophy.

Natural Theology.

Also in one of the following subjects to be selected by the candidate: -

- a. History of Philosophy.
- b. Elements of Jurisprudence.
- c. Evidences of Revealed Religion (as in Butler's Analogy and Paley's Evidences).
- 10. As soon as possible after each Examination for Honors, the Syndicate shall publish a list of the candidates who have passed, arranged in three divisions, each in the order of merit. Candidates shall be bracketed together, unless the Examiners are of opinion that there is clearly a difference in their merits.
- 11. The candidate who shall be placed first in the first division in each branch shall receive a Gold Medal, and a prize of books to the value of one hundred Rupees, and the second student of the first class in each branch shall receive a Silver Medal, and a prize of books to the value of one hundred Rupees.

The following shall be text-books of Examination in the foregoing subjects, and may, from time to time, be altered by the Syndicate:—

PRINCIPLES OF JURISPRUDENCE.

Stephen's Blackstone-Introduction, and Section 2.

Kent's Commontaries—Part 1, Lecture 1; Part 3, Lectures 20, 21, 22 and 23.

Story's Conflict of Laws,-Chapters 1 and 2, or

Wheaton's Elements of International Law-Part 2, Chapter 2.

PERSONAL RIGHTS AND STATUS.

Stephen's Blackstone—Books I. and III. Book IV. Part 1. Chapters 1, 2, 6 and 10; Part III. Chapters 1, 7, 10 and 13.

Kent's Commentaries-Part 4, Lectures 24 to 33 inclusive.

Strange's Hindu Law-Chapters 2, 3, 4 and 10, or

Macnaghten's Hindu Law-Chapters 4, 6 and 7.

Macnaghten's Mahomedan Law-Chapters 7, 8 and 9.

Story's Conflict of Laws-Chapters 3 and 4.

THE RIGHTS OF PROPERTY, THE MODES OF ITS ACQUISITION, AND HEREIN THE LAW OF CONFRACTS, AND SUCCESSIONS, AS WELL TESTAMENTARY AS AB INFESTATO.

Stephen's Blackstone-Book II.-Introduction and Part 2.

Kent's Commentaries-Parts 5 & 6,

Macpherson on Contracts.

Williams on Real Property—Part I. Chapters 1 to 4 and 6 to 8; Part IV. Chapter 2; Part V. or

Stephen's Blackstone-Book, II. Part 1, (excepting Chapter 2).

Strange's Hindu Law-Chapters 1, 6, 7, 8, 9, and 12, or

Macnaghten's Hindu Law-Chapters 1, 2, 3, 4, and 9.

Macnaghten's Mahomedan Law—Chapters 1, 2, 3, 4, 5, 6, 10, 11 and 12.

Dattaca Chundrica. (Sutherland's Translation).

Macpherson on Mortgages.

THE LAW OF EVIDENCE, OF CRIMES AND OF PROCEDURE.

Indian Penal Code.

Stephen's Blackstone-Books V. and VI.

Taylor or Goodeve or Norton on Evidence.

The Codes of Civil and Criminal Procedure. All Acts and Regulations, in force, regulating the Revenue Courts of the Bengal Presidency.

Where two or more Books are mentioned in the alternative, it shall not be necessary for the Students to pass in more than one of the books.

- 7. A paper of questions shall be set in each of the following subjects:
  - a. The Principles of Jurisprudence and the Roman Law.
- b. Personal Rights and Status, and the infringement of such rights.
- c. The rights of Property, and the infringement of them, the modes of its acquisition, and the Law of Successions, as well testamentary as ab intestate.
  - d. The Law of Contracts.
- c. The Code of Civil Procedure, the Revenue Laws, and the Law of Evidence.
  - f. Penal Code and Code of Criminal Procedure.
- 8. As soon as possible after the Examination, the Syndicate shall publish a list of the successful candidates arranged alphabetically.

## BACHELOR IN LAW.

- 1. An Examination for the Degree of Bachelor in Law shall be held annually in Calcutta, and shall commence in the first week in January.
- 2. Any Bachelor of Arts may be admitted to this Examination, provided he has passed the B. A. Examination at least one year previously, and has attended lectures in a school of Law, recognized by the Syndicate, for three academical years.
  - 3. Every candidate for admission to the Exami-

nation shall send his application, with a certificate in the form entered in Appendix A, to the Registrar at least fourteen days before the date fixed for the commencement of the Examination.

- 4. A fee of thirty Rupees shall be payable by each candidate. No candidate shall be admitted, unless he shall have paid this fee to the Registrar. A candidate who fails to pass or present himself for Examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent Examinations on payment of a like fee of thirty Rupees on each occasion.
- 5. Every candidate shall be examined in the subjects and in the manner ordered in paragraphs 6 and 7 of the Regulations for a Licence in Law.
- 6. As soon as possible after the Examination, the Syndicate shall publish a list of the successful candidates arranged in two divisions, each in order of merit. The first student of the first class shall receive a Gold Medal, provided that he is considered by the Examiners to have evinced sufficient merit. The Syndicate shall be at liberty to award one or more special prizes, if they deem it expedient.
- 7. Any Licentiate in Law, who has graduated in Arts,\* may, on paying the usual fee, be admitted to the Degree of Bachelor in Law without further Examination.

Any person who has passed a University Law Examination in or before January, 1864, or the Examination for a Licence in Law, may proceed to the B. A. Examination without passing the First Examination in Arts, or completing the two years of study at an affiliated Institution required under para. 2 of the B. A. Regulations.

# EXAMINATION FOR HONORS IN LAW.

- 1. An Examination for Honors in Law shall be held annually in Calcutta, commencing in the first week in March.
- 2. Any candidate who has passed the Examination for the Degree of Bachelor in Law or for a Licence in Law may be examined for Honors.
- 3. Every candidate for Honors shall send his application, specifying the subjects in which he desires to be examined, to the Registrar at least one month before the date fixed for the commencement of the Examination.
- 4. The Examination shall be conducted by means of printed papers.
- 5. Every candidate shall be examined in two or more of the following subjects to be selected by himself.
  - a. Hindu and Mahomedan Law.
- b. Law of England, as administered in H. M.'s High Court of Judicature in the exercise of its original Civil Jurisdiction.
- c. General Law, as administered in II. M.'s High Court of Judicature in the exercise of its appellate Jurisdiction, and in the Courts subordinate to it.
  - d. Mercantile Law.
  - e. Roman Civil Law.
  - f. Conflict of Laws.
  - g. International Law.
- 6. A separate paper shall be set in each of the seven subjects; and in addition to the two subjects in which they must of necessity elect to be examined, candidates shall be permitted to enter for all or for any number of the others.

7. As soon as possible after the Examination, the Syndicate shall publish a list of the candidates who have passed arranged in order of merit. Candidates shall be bracketed, together, unless the Examiners are of opinion that there is clearly a difference in their merits. Each successful candidate shall receive a certificate, setting forth the branches in which he has been examined.

## DOCTOR IN LAW.

- 1. No special Examination shall be held, but any person who has graduated as Bachelor in Law, and has at any time passed the Honor Examination in four subjects at least, may be admitted to the Degree of Doctor in Law without examination, provided that—
- (1) Two members of the Faculty of Law or two Doctors in Law shall testify, to the satisfaction of the Syndicate, that since graduating he has practised his profession with repute for five years, and that in habits and character he is a fit and proper person for the Degree of Doctor, and
- (2) He shall produce an Essay, approved by the President of the Faculty of Law for the time being, on some subject connected with Law or Jurisprudence.
- 2. A fee of Rupees one hundred shall be payable for the Degree of Doctor in Law. No candidate shall be admitted, unless he have previously paid this fee to the Registrar.

# \*LICENCE IN MEDICINE AND SURGERY.

1. An Examination for a Licence† in Medicine and Surgery shall be held annually in Calcutta, and shall commence in the last week of March. The Examination shall consist of two parts, entitled respectively the First and Second Licentiate Medical Examinations.

FIRST LICENTIATE MEDICAL EXAMINATION.

- 2. Any undergraduate of the University, who can produce certificates to the following effect, may be admitted to the Examination:
  - a.-Of having completed his nineteenth year.
- b.—Of having been engaged in Medical studies for three academical years after passing the Entrance Examination.
- c.-Of having attended the following courses of lectures at a School of Medicine recognized by the Syndicate:-

Two Courses of 70 Lectures.

Descriptive and Surgical Anatomy.

Chemistry.

Materia Medica.

General Anatomy and Physiology.

One Course of 40 Lectures.

Botany.

One Course.

Practical Chemical Exercises in testing the nature of ordinary poisons, and in examination of animal secretions and urinary deposits.

- d.—Of having studied Practical Pharmacy for three months, and of having acquired a practical knowledge of the preparation and compounding of Medicines.
- e.—Of having dissected during three winter terms, and of having completed at least twelve Dissections in each term.
- \* Candidates who enter on their Medical studies before June 1866, may, if they so desire, be examined under the former regulations (see Calendar 1863-64.)
  - † The holder of this Licence shall be styled Licentiate in Medicine.

- 3. Every candidate for admission to the Examination shall send his application, with a certificate in the form entered in Appendix A, to the Registrar at least two days before the date fixed for the commencement of the Examination.
- 4. A fee of five Rupees shall be payable by each candidate. No candidate shall be admitted, unless he shall have paid this fee to the Registrar. A candidate who fails to pass or present himself for Examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent Examinations, on payment of a like fee of five Rupees on each occasion.
- 3. The Examination shall be written, oral, and practical.
- 6. Every candidate shall be examined in the following subjects:—

Descriptive and Surgical Anatomy.

Chemistry.

Botany.

Materia Medica and Pharmacy.

General Anatomy and Physiology.

Practical Chemistry, so far as regards the testing of the presence and nature of ordinary poisons, and the examination of animal secretions and urmany deposits.

The Syndicate shall notify, three months before the Examination, the portions of the subjects of Chemistry and Botany in which candidates shall be examined.

7. As soon as possible after the Examination, the Syndicate shall publish a list of the candidates who have passed, arranged in alphabetical order. Every candidate shall, on passing, receive a certificate in the form entered in Appendix A.

- 8. Any passed student of the Vernacular classes of any affiliated Medical College, or School of Medicine, if recommended by the Principal for distinguished merit, may be admitted to this Examination on producing certificates to the following effect:—
  - (a) Of having passed the Entrance Examination of the University.
  - (b) Of having completed his nineteenth year.
- (c) Of having subsequently to qualifying in the Vernacular classes, been engaged for one year in the study of Medicine and Surgery, and during that time of having attended, in a School of Medicine recognized by the Syndicate, a course of lectures in each of the following subjects:—

Anatomy.

Physiology.

Botany.

Chemistry.

SECOND LICENTIATE MEDICAL EXAMINATION.

- 9. Any candidate, who can produce certificates to the following effect, may be admitted to this Examination:—
- (a) Of having passed the First Licentiate Medical Examination at least two years previously.
- (b) Of having subsequently to passing the First Licentiate Medical Examination, attended the following Courses of Lectures at a School of Medicine recognized by the Syndicate:—

Two Courses of 70 Lectures.

Medicine (including Hygiene and General Pathology).

Surgery.

Midwifery.

Two Courses of 50 Lectures.

Medical Jurisprudence

One Course of 20 Lectures.

Diseases of the Eye.

(c) Of having, subsequently to passing the First Licentiate Medical Examination, dissected the surgical regions, and performed surgical

operations during two winter sessions; the certificate to state the number and nature of the operations so performed.

(d) Of having conducted at least six Labors.

Certificates on this subject will be received from any legally qualified practitioner in Medicine.

(e) Of having attended Hospital and Dispensary Practice during the last three academic years of study in the following manner, viz.—

Three months of attendance at the Out-door Dispensary of a recognized Hospital.

Fifteen months of attendance at the Surgical Practice of a recognized Hospital, and Lectures on Clinical Surgery during such attendance.

Fifteen months of attendance at the Medical Practice of a recognized Hospital, and Lectures on Clinical Medicine during such attendance.

Three months of attendance at the practice of an Eye-Infirmary.

- (f) Of having drawn up, in his own handwriting, six Medical and six Surgical cases, during his period of service as Clinical Clerk or dresser.
- (g) Of general character and conduct, from the Principal of the College or School of Medicine at which he has studied.
- 10. Every candidate for admission to the Examination shall send his application, with a certificate in the form entered in Appendix A, to the Registrar at least two days before the date fixed for the commencement of the Examination.
- 11. A fee of twenty rupees shall be payable by each candidate. No candidate shall be admitted, unless he shall have paid this fee to the Registrar. A candidate who fails to pass or present himself for Examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent Examinations, on payment of a like fee of twenty rupees on each occasion.

- 12. The Examination shall be written, oral and practical.
- 13. Every candidate shall be examined in the following subjects:—

Principles and Practice of Medicine.

Do. do. of Surgery.

Ophthalmic Medicine and Surgery.

Midwifery.

Medical Jurisprudence.

Practical Toxicology.

The Clinical Examination shall be conducted in the wards of a Hospital.

# 14. Every candidate shall be required:—

To examine, diagnose and treat cases of Acute or Chronic Diseases to be selected by the Examiners, and to draw up careful histories of the cases; also, if required, to perform and report in detail necroscopical examinations of any of the selected cases that may have died in Hospital.

To apply apparatus for great surgical injuries and explain the objects to be attained by them, as well as the best manner of effecting those objects.

To examine, in presence of the Examiners, morbid products chemically and by the aid of the microscope, demonstrating the results obtained.

To perform capital operations upon the dead subject, after detailing to the Examiners the pathological conditions in which such operations are necessary, the different modes of operation adopted, and the reasons for preferring any particular mode of procedure.

15. As soon as possible after the Examination, the Syndicate shall publish a list of the successful candidates arranged in alphabetical order. Every candidate shall, on passing, receive a certificate in the form entered in Appendix A.

# BACHELOR IN MEDICINE.

1. An Examination for the degree of Bachelor in Medicine shall be held annually in Calcutta and shall commence in the last week of March. The Examination shall consist of two parts, entitled respectively the First and Second M. B. Examinations.

## FIRST M. B. EXAMINATION.

- 2. Any Undergraduate of the University, who can produce certificates to the following effect, may be admitted to this Examination:—
- (a) Of having passed the First Examination in Arts; Latin having been one of the languages in which he was examined.\*
- (b) Of having, subsequently to passing the First Examination in Arts, been engaged in Medical studies for three academical years.
- (c) Of having attended the following courses of lectures at a School of Medicine recognized by the Syndicate:—

Two courses, each of 40 Lectures.

Descriptive and Surgical Anatomy.

Chemistry.

Materia Medica.

General Anatomy.

Two Courses, cach of 40 Lectures.

Botany. .

One course of 40 Lectures.

Comparative Anatomy and Zoology.

One Course.

- Practical Chemical Exercises in testing the nature of ordinary poisons, and in examination of animal secretions and urinary deposits.
- (d) Of having studied Practical Pharmacy for three months, and of having acquired a practical knowledge of the preparation and compounding of Medicines.
- (e) Of having dissected during three Winter terms, and of having completed at least twelve dissections in each term.

The words here printed in Italics are to take effect as soon after 1869 as the Syndicate may order.

- 3. Every candidate for admission to the Examination shall send his application, with a certificate in the form entered in Appendix A, to the Registrar at least two days before the date fixed for the commencement of the Examination.
- 4. A fee of ten Rupees shall be payable by each candidate. No candidate shall be admitted, unless he shall have paid this fee to the Registrar. A candidate who fails to pass or present himself for Examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent Examinations, on payment of a like fee of ten Rupees on each occasion.
- 5. The Examination shall be written, oral, and practical.
- 6. Every candidate shall be examined in the following subjects:—

Descriptive and Surgical Anatomy.

Chemistry.

Botany.

Materia Medica and Pharmacy.

General Anatomy and Physiology.

Comparative Anatomy and Zoology.

Practical Chemistry, so far as regards the testing of the presence and nature of ordinary poisons, and the examination of animal secretions and urinary deposits.

7. As soon as possible after the commencement of the Examination, the Syndicate shall publish a list of the candidates who have passed, arranged in two divisions, the first in order of merit, and the second in alphabetical order. Every candidate shall, on passing, receive a certificate in the form entered in Appendix A.

8. Scholarships of 32 Rupees a month, on the result of this Examination, and tenable for two years, with the style of Junior University Scholar, shall be given in each of the following subjects:—

Descriptive and Surgical Anatomy.

Chemistry.

Materia Medica and Pharmaceutical Chemistry.

Botany.

Physiology and Comparative Anatomy.

9. Scholarships shall be awarded on the recommendation of the Examiners, and shall be held subject to good behaviour.

### SECOND M. B. EXAMINATION.

- 10. Any candidate, who can produce certificates to the following effect, may be admitted to this Examination:—
- (a) Of having passed the First M. B. Examination at least two years previously.
- (b) Of having subsequently to passing the First M. B. Examination, attended the following courses of Lectures at a School of Medicine recognized by the University:—

Two Courses, each of 70 Lectures.

Medicine (including Hygiene and General Pathology).

Surgery.

Midwifery.

Two Courses of 50 Lectures.

Medical Jurisprudence.

One Course of 50 Lectures.

Diseases of the Eye.

- (c) Of having, subsequently to passing the First M. B. Examination, dissected the surgical regions, and performed surgical operations during two winter sessions; the certificate to state the number and nature of the operations so performed.
  - (d) Of having conducted at least six Labors.

Certificates on this subject will be received from any legally qualified practitioner in Medicine.

(e) Of having attended Hospital and Dispensary Practice during the last three academic years of study in the following manner, viz.:—

Three months of attendance at the out-door Dispensary of a recognized Hospital.

Fifteen months of attendance at the Surgical Practice of a recognized Hospital and Lectures on Clinical Surgery during such attendance.

Fifteen months of attendance at the Medical Practice of a recognized Hospital and Lectures on Clinical Medicine during such attendance. Three months of attendance at the practice of an Eye-Infirmary.

- (f) Of having drawn up, in his own handwriting, Medical and Surgical cases during his period of service as Clinical Clerk or dresser.
- (y) Of general character and conduct, from the Principal of the College or School of Medicine at which he has studied.
- 11. Every candidate for admission to the Examination shall send his application, with a certificate in the form entered in Appendix A, to the Registrar at least two days before the date fixed for the commencement of the Examination.
- 12. A fee of twenty rupees shall be payable by each candidate. No candidate shall be admitted, unless he shall have paid this fee to the Registrar. A candidate who fails to pass or present himself for Examination shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent Examinations, on payment of a like fee of twenty rupees on each occasion.
- 13. The Examinations shall be written, oral, and practical.
- 14. Every candidate shall be examined in the following subjects:—

Principles and practice of Medicine.

·Do. do. of Surgery.

Ophthalmic Medicine and Surgery.

Midwifery.

Medical Jurisprudence.

Practical Toxicology.

The Clinical Examination shall be conducted in the Wards of a Hospital.

## 15. Every candidate shall be required:—

To examine, diagnose and treat cases of Acute or Chronic Disease to be selected by the Examiners; and to draw up careful histories of the cases; also, if required, to perform and report in detail necroscopical examinations on any of the selected cases that may have died in Hospital.

To apply apparatus for great surgical injuries and explain the objects to be attained by them, as well as the manner of effecting those objects.

To examine, in presence of the Examiners, morbid products chemically and by the aid of the microscope, demonstrating the results obtained.

To perform capital operations upon the dead subject, after detailing to the Examiners the pathological conditions in which such operations are necessary, the different modes of operation adopted, and the reasons for preferring any particular mode of procedure.

- 16. As soon as possible after the Examination, the Syndicate shall publish a list of the successful candidates, arranged in two divisions, each in alphabetical order.
- 17. Any Licentiate of three years' standing may be admitted to this Degree, on paying a fee of fifty rupees and producing certificates to the following effect:—
- (a) Of having passed the First Examination in Arts;\* Latin having been one of the languages in which he was examined.
  - (b) Of having attended, at a School of Medicine recognized by the

Syndicate, a Course of lectures in Comparative Anatomy and Zoology, consisting of at least 40 Lectures.

- (c) Of having passed an Examination in Comparative Anatomy and Zoology.
- 18. Any candidate who has passed the Licentiate Examination before 1867, or the Senior Diploma Examination of the Medical College, may be admitted to this degree, without further Examination or fee, on producing a certificate of having passed the First Examination in Arts,\* Latin having been one of the languages in which he was examined.†

## HONORS IN MEDICINE.

1. Any candidate who has been placed in the first division at the second Examination for the Degree of . Bachelor of Medicine, may be examined for Honors in one or more of the following branches:—

Surgery.

Medicino.

Midwifery.

Medical Jurisprudence.

- 2. The Examinations shall take place in the week following the completion of the second Examination, and shall be conducted by means of written papers and practical tests.
- 3. As soon as possible after each Examination for Honors, the Syndicate shall publish a list of the successful candidates, arranged in order of merit. Can-
- \* Any Licentiate in Medicine and Surgery may proceed to the First Examination in Arts or to the B. A. Examination, without completing the two years' attendance at an affiliated Institution, required under para. 2 of the First Arts Regulations.
- † The words here printed it italies are to take effect as soon after 1869 as the Syndicate may order.

didates shall be bracketed together, unless the Examiners are of opinion that there is clearly a difference in their merits.

4. Scholarships of sixty Rupees a month, on the result of this Examination, and tenable for two years, with the style of Senior University Scholar, shall be given in each of the following subjects:—

Midwifery and the diseases of women and children. Surgery.

Mediemo.

5. Scholarships shall be awarded on the recommendation of the Examiners, and shall be held subject to good behaviour.

### \*DOCTOR IN MEDICINE.

- 1. An Examination for the Degree of Doctor in Medicine shall be held annually in Calcutta, and shall commence in the first week of April.
- 2. Any Bachelor in Medicine may be admitted to this Examination, provided he can produce certificates to the following effect:—
  - (a) Of havir been admitted to the degree of † Bachelor of Arts.
- (b) Of having subsequently to passing the M. B. Examination, completed—

Five years of certified practice of the Medical profession, or Two years' Hospital practice and two years private practice, or

<sup>\*</sup> Candidates, who enter on their Medical studies before June 1866, may, if they so desire, be examined under the former regulations (see Calendar 1863-64).

<sup>†</sup> Any Bachelor in Medicine may proceed to the B. A. Examination, without completing the two years' study at an affiliated Institution required under para. 2 of the B. A. Regulations.

Two years practice, either hospital or private, if the candidate be a Graduate in Medicine with Honors.

- (c) Of good moral character, signed by two persons of respectability.
- 3. Every candidate for admission to the Examination shall send his application, with a certificate in the form entered in Appendix A., to the Registrar at least one month before the date fixed for the commencement of the Examination.
- 4. A fee of one hundred Rupees shall be payable by each candidate. No candidate shall be admitted, unless he shall have paid this fee to the Registrar.. A candidate who fails to pass or present himself for Examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent Examinations on payment of a like fee of one hundred Rupees on each occasion.
- 5. The Examination shall be written, oral and practical.
- 6. Every candidate shall be examined in the following subjects:—

Medicine, including the practice of Physic.

Surgery.

Midwifery.

Hygiene and Pathology.

- 7. As soon as possible after the Examination, the Syndicate shall publish a list of the successful candidates, arranged in alphabetical order.
- 8. Any candidate who is not a Bachelor in Medicine, may be admitted to the Examination for the degree of Doctor in Medicine, on producing certificates to the following effect:—

- (a) Of having passed the Senior diploma Examination of the Medical College or the Licentiate Examination in Medicine and Surgery of the University.
  - (b) Of having attained the age of 35 years.
- Of having practised the Medical profession with repute for five (c) years.
  - (d) Of fitness, moral and social, for the degree.
- (e) Of having passed the B. A. Examination; \* Latin having been one of the languages in which he was examined. † or

The following preliminary Examination, for those candidates only who had completed their Medical Education in or before the session of 1859;—

### English.

Subjects of Examination shall not be appointed, but the answers of the candidates in all subjects must be such as to show a competent knowledge of the English language

Mental and Moral Science.

Mental Science; -as contained in Abercrombie on the Intellectual Powers.

Moral Philosophy; -as contained in Payne and Abercrombie.

# LICENCE IN CIVIL ENGINEERING.

- 1. An Examination for a Licence in Civil Engineering shall be held annually in Calcutta, and shall commence in the first week in May.
- 2. Any under-graduate of the University may be admitted to this Examination, provided he has prosecuted a regular course of study in a School of Engi-

Any person, who has passed a University Examination for a Licence in Medicine and Surgery in or before 1864, may proceed to the B. A. Examination without passing the First Examination in Arts, or completing the two years of study at an affiliated institution required under para. 2 of the B. A. Regulations.

† The words here printed in italics are to take effect as soon after

1869 as the Syndicate may order.

The holder of this Licence shall be styled a Licentiate in Civil Engineering.

neering recognized by the Syndicate, for three academical years after passing the Entrance Examination.

- 3. Every candidate for admission to the Examination shall send his application, with a certificate in the form entered in Appendix A, to the Registrar at least fourteen days before the date fixed for the commencement of the Examination.
- 4. A fee of twenty-five Rupees shall be payable by each candidate. No candidate shall be admitted, unless he has paid this fee to the Registrar. A candidate who fails to pass or present himself for Examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent Examinations on payment of a like fee of twenty-five Rupees on each occasion.
- 5. Every candidate shall be examined in the following subjects:—
  - I. Mathematics.
  - II. Mechanical Philosophy.
  - III. Natural and Experimental Science.
  - IV. Construction.
  - V. Drawing.
  - VI. Geodesy.

### I. MATHEMATICS.

Arithmetic.
Algebra.

Simple and Quadratic Equations, Ratio, Proportion and Variation, Arithmetical and Geometrical Progression.

Binomial Theorem.

Logarithms.

Euclid—Books 1, 2, 3, 4, 6, and 11 to Prop. 21, with deductions. Conic Sections, treated Geometrically.

Trigonometry.

As far as the solution of all cases of plane triangles.

Mensuration.

Mensuration of Surfaces and Solids.

II. MECHANICAL PHILOSOPHY.

Statics.

Composition and Resolution of forces, Centre of Gravity.

Mechanical Powers.

Friction.

Dynamics.

General Laws of motion.

Motion of Falling Bodies in free space and down inclined planes. Vibration of simple pendulums.

Collision of Bodies.

Hydrostatics.

Equilibrium of Fluids.

Specific Gravity.

Equilibrium of floating bodies.

Centre of pressure.

Elastic fluids.

Principles of the Barometer and Thermometer, and application to determine heights of mountains; of the Air-pump, Condensor, Pump, Siphon, and Hydrostatic Press.

Hydrodynamics.

Motion of fluids through a small orifice.

Percussion and Resistance of Fluids.

Optics.

Laws of reflection, refraction, and radiation from Plane and Spherical Surfaces. Formation of Images; simple and compound Lenses; the Eye, Principles of the Sextant, Telescope, and Microscope.

III. NATURAL AND EXPERIMENTAL SCIENCE.

Chemistry.

The elements of inorganic Chemistry, as laid down in Chambers's Course, and as applied to the preparation of wrought-iron, steel and cements.

Heat.

Elementary laws of Heat, with reference to steam and combustion of fuel.

Mineralogy.

Physical Characteristics of Minerals.

·Physical Geography.

With special reference to that of India.

IV. CONSTRUCTION.

Materials.

Stones.

Preparation of Bricks and Tiles, Mortars and Cements, Paints, Iron and Steel, Preservation of Timber.

Practice of Building.

Earthwork.

Construction of Roads.

Construction of Railroads.

Selection of Line, Cuttings and Embankments, Tunnels, Gradients, Curves.

The practice of B. idge Building.

Curpentry.

Scarfs, Joints, Centres for Bridges, Roofs.

Hydraulic Works.

Flow of water in pipes and open channels, and over Weirs; Tanks; Canals; Sluices; Locks.

Strength of Materials.

Resistance of Iron and Wood to compression, tension, transverse and longitudinal strains and detrusion. Deflection of Beams, Various forms of Beams, Solid, and Hollow.

Stability of Structures.

As applied to retaining walls, bridges, abutments, walls of Buildings, and framed structures.

Mechanism.

Motion; Machines; advantage and uses of.

Elementary forms; Levers; Cranks; Rolling contracts; Sliding contacts; Mechanism for modifying motion; Accumulation and Regulation of motion.

Sources of power-Gravity, Wind, Heat, Muscular action.

The Steam Engine in detail.

Hydraulic Machines-Water wheels and Turbines.

Designs.

An original design for a work on given data, with report, specification, and estimate.

#### V. DRAWING.

Geometrical, Mechanical, Engineering and Architectural, Perspective, Isometrical perspective, Topographical and Landscape Drawing.

(Attested specimens, of each kind, to be submitted to the Examiners, in addition to the specimens to be executed during the Examination, to which marks will be assigned).

#### VI. GEODESY.

Use of the Scales, Prismatic Compass, Lovel, Theodolite and Plane Table.

Topographical Surveying of limited areas.

Practice of levelling.

Route Surveying and laying out curves.

(Attested Surveys, executed by the candidate, will be submitted to the Examiners, to which marks will be assigned.)

6. The Examination shall be conducted by means of printed papers, and a paper of questions shall be set in each of the following subjects—

Arithmetic and Algebra.

Geometry and Conic Sections.

Practical Trigonometry, Logarithms and Mensuration.

Statics and Dynamics.

Hydrostatics and Optics.

Chemistry and Heat.

Mineralogy and Physical Geography.

Practice of Building.

Earthworks and Construction of Roads and Railways.

Carpentry and Mechanism.

Hydraulic Works.

Strength of Materials and Stability of Structures.

Drawing and Geodesy.

7. As soon as possible after the Examination, the Syndicate shall publish a list of the successful candidates arranged in two divisions, each in order of merit. Every candidate shall, on passing, receive a certificate in the form entered in Appendix A.

# BACHELOR IN CIVIL ENGINEERING.

- 1. An Examination for the degree of Bachelor in Civil Engineering shall be held annually in Calcutta, and shall commence in the first week of May.
- 2. \*Any candidate may be admitted to the Examination, provided he has prosecuted a regular course of study at a school of Engineering, recognized by the Syndicate, for three academical years, after passing the First Examination in Arts.
- 3. Every candidate for admission to the Examination shall send his application, with a certificate in the form entered in Appendix A, to the Registrar, at least fourteen days before the date fixed for the commencement of the Examination.
- 4. A fee of thirty Rupees shall be payable by each candidate. No candidate shall be admitted, unless he has paid this fee to the Registrar. A candidate who fails to pass or present himself for Examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent Examinations on payment of a like fee of thirty Rupees on each occasion.
- 5. Every candidate shall be examined in the subjects and in the manner ordered in paras. 5 and 6 of the Regulations for a Licence in Civil Engineering.

<sup>\*</sup> Any Licentiate in Engineering may proceed to the First Examination in Arts and the Bachelor of Arts Examination without completing the two years of study at an affiliated Institution, required under para. 2 of the B. A. Regulations.

- 6. As soon as possible after the Examination, the Syndicate shall publish a list of the successful candidates arranged in two divisions, each in order of merit. Every candidate shall, on passing, receive a certificate in the form entered in Appendix A.
- 7. The first candidate of the first class shall receive a gold medal to the value of one hundred Rupees.
- 8. Any Licentiate in Civil Engineering who has passed the First Examination in Arts may, on paying the usual fee, be admitted to the degree of Bachelor in Civil Engineering without further Examination.

# HONORS IN CIVIL ENGINEERING.

- 1. An Examination for Honors in Civil Engineering shall be held annually in Calcutta, commencing in the first week of June.
- 2. Any candidate who has passed the Examination for the degree of Bachelor in Civil Engineering, or for a Licence in Civil Engineering, may be examined for Honors.
- 3. Every candidate for Honors shall send his application to the Registrar, at least fourteen days before the date fixed for the commencement of the Examination.
  - 4. The Examination shall be written and oral.
- 5. Every candidate shall be examined in the following subjects:—

- I. Mathematics.
- II. Mechanical Philosophy.
- III. Natural and Experimental Science.
- IV. Construction.
  - V. Geodesy.

#### I. MATHEMATICS.

Spherical Trigonometry, as applied to Geodesy. Descriptive Geometry.

### II. MECHANICAL PHILOSOPHY.

Central Forces.

Rotation and Oscillation of Bodies. Centrifugal Forces.

Motion of Fluids.

Geometrical Optics.

The Elements of Astronomy, and its application to Geodesy.

#### III. NATURAL AND EXPERIMENTAL SCIENCE.

Heat-with reference to Steam and Combustion.

Chemistry—as applied to Cements and preservation of Materials.

Practical application of Electrical Science.

General principles of Geology and Mineralogy, and their applications to Engineering.

#### IV. CONSTRUCTION.

Practice of Building.

Theory and practice of Bridge-building.

Roads and Railways.

Hydraulic Works.

Equilibrium of Structure, Theory of Machines, with special reference to the Steam Engine.

Principles of Design.

### V. GEODESY.

Surveying.

Topographical drawing.

6. The candidate's qualifications shall be tested by written papers on the first three and fifth subjects, and by written papers and *vivâ voce* Examination on he fourth subject.

7. As soon as possible after the Examination, the Syndicate shall publish a list of the successful candidates arranged in order of merit.

# MASTER IN CIVIL ENGINEERING.

- 1. No special Examination shall be held, but any person who has graduated as B. C. E. and has at any time passed the Honor Examination, may be admitted to the Degree of Master in Civil Engineering without examination, provided that—
- (1.) Two members of the Faculty of Engineering or two Masters in Civil Engineering shall testify to the satisfaction of the Syndicate that, since graduating, he has practised his profession with repute for four years, and that in habits and character he is a fit and proper person for the Degree of Master.
- (2.) He shall produce an Essay approved by the President of the Faculty of Engineering for the time being, ou some subject connected with Engineering.
- · 2. •A fee of Rupees one hundred shall be payable for the Degree of Master in Civil Engineering. No candidate shall be admitted, unless he have previously paid this fee to the Registrar.

# GENERAL.

1. No question shall be put at any University Examination, so as to require an expression of religious belief on the part of the candidates; and no answer or translation given by any candidate shall be objected to on the ground of its expressing any peculiarities of religious belief.

2. The Syndicate shall have power in any case to admit to any University Examination in any Faculty, any person who shall present a certificate from any Institution authorised on that behalf by the Governor-General of India in Council, shewing that in such Institution he has attended courses of study, passed Examinations, or taken degrees corresponding to those which, in connection with such Examinations, are exacted from students of this University.



## ENTRANCE EXAMINATION.

#### APPLICATION.

To the Registrar of the Calcutta University.

SIR,

I request permission to present myself at the ensuing Entrance Examination of the Calcutta University.

The Entrance fee of 10 Rupees is forwarded herewith.

I am, &c.

#### CERTIFICATE.

The certificate is to be signed by the Principal or Headmaster of the College or School at which the candidate has been or is being educated, if he be a private's student, by the Deputy Inspector of Schools of the District in which he resides.

I certify that the abovenamed candidate has, to the best of my belief, attained the age of 16 years, that I know nothing against his moral character, that he has not already passed the Entrance Exa-

mination of the Calcutta University, that there is in my opinion a reasonable probability of his now passing it, and that he has signed the above application.

The

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Particulars to be filled in by the candidate:-

Name.

Age.

Religion.

Race (i. e. nation, tribe, &c. &c.)

Where educated.

Present position (i. c. at School, or present occupation).

Town or village, where resident.

Name of Father or Guardian.

Where to be examined.

Language in which, besides English, to be examined.

<sup>\*</sup> Private Student -- one who has attended at no educational Institution for six months before the Examination.

## FIRST EXAMINATION IN ARTS.

## APPLICATION.

To the Registrar of the Calcutta University.

SIR.

I request permission to present myself at the ensuing First Examination in Arts. In addition to the necessary subjects, I offer to be examined in the language.

The fee of 20 Rupees forwarded herewith.

I am, &c. &c.

## CERTIFICATE.

I certify that the abovenamed candidate

has satisfied me by the production of the Registrar's certificate that he has passed the Entrance Examination of the Uni-

This certificate to be signed by the Principal or Head Master of an adhlated Institution,

Entrance Examination of the University, that I know nothing

against his moral character, that there is, in my opinion, a reasonable probability of his now passing the First Examination in Arts, and that I believe the subjoined account to be true.

Particula:	rs to be fi	lled i	n by	the 6	Cani	lidate		
Λge,								***
Race (i. c. natio	n., tribe,	&c.,	&c.)		•••	•••		
Present occupa	tion,	•••	•••	•••	•••	•••	•••	***
Date of Entran								***
Where to be exa	imined,	•••	•••	•••	•••	•••		***
Period or Periods of S  Affiliated Institution or Institutions at which candidate has studied.	Perio	d or	Perio	ods o	Sign	natu or H	re of lead	mination.  Principal Master of Institution.

## B. A. EXAMINATION.

## APPLICATION.

To the Registrar of the Calcutta University.

SIR.

I request permission to present myself at the ensuing Examination for the degree of Buchelor of Arts.

I am, &c &c.

## CERTIFICATE.

I certify that the abovenamed candidate has satisfied me by the production of the Registrar's certificate to be sizned by a tificate that he has passed the First

The certificate to be signed by a Principal or Head Master of an allihated Institution.

tificate that he has passed the First Examination in Arts of the Univerty of Calcutta, that I know nothing

against his moral character, that there is, in my opinion, a reasonable probability of his now passing the B. A. Examination, and that I believe the subjoined account to be true.

Particulars to be filled in by the Candulate . -

Age.

Date of Entrance.

Date of passing First Examination in Arts.

Race (i. e. Nation, tribe, &c &c.)

Religion

Present Occupation.

Language in which, besides English, to be examined.

Optional subject.

Period or Periods of study since passing the First Ecomination in Arts.

Affiliated Institution or Institutions at which candidate has stu- died.	Period or Periods of	Signatures of Principals or Head Masters of Affiliated Institu- tions,
	is.	

## M. A. EXAMINATION.

## APPLICATION.

 $T_0$ 

The Registrar of the Calcutta University.

SIR,

I request permission to present myself at the ensuing Examination for the Degree of Master of Arts in

I am, &c.

Particulars to be filled in by the Candidate.

Age.

Date of Graduation in Arts.

Race.

Religion (i. e. nation, tribe, &c.)

Present occupation.

## CERTIFICATE.

I certify that the abovenamed candidate has satisfied me by the production of his diploma, that he has passed the Bachelor of Arts Examination of the University of,

that I know nothing against his moral character, and that I believe the above account to be true.

## LICENCE IN LAW.

APPLICATION.

To the Registrar of the Calcutta University.

SIR,

I request permission to present myself at the ensuing Examination for a Licence in Law.

I am, &c. &c.

#### CERTIFICATE.

To be signed by the Principal of the College at which the Candidate
has studied.

The certificate and application for the Degree of Bachelor in Law to be in the same form as the foregoing.

## DOCTOR IN LAW.

## APPLICATION.

To the Registrar of the Calcutta University.

SIR,

I request to be admitted to the Degree of Doctor in Law.
I am, &c. &c.

#### CERTIFICATE.

To be signed by the President of the Faculty of Law.

I certify that ————— has fulfilled the requirements contemplated under para, 1, of the D. L. Regulations.

# LICENCE IN MEDICINE AND SURGERY. FIRST EXAMINATION.

#### APPLICATION.

To the Registrar of the Calcutta University.

SIR,

I request permission to present, myself at the ensuing First Examination for a Licence in Medicine and Surgery.

I am, &c. &c.

#### CERTIFICATE.

To be signed by the Principal of the College at which the Candidate has studied.

The applications and certificates of the following Examinations to be in the same, as the foregoing:—

Licence in Medicine and Surgery, Second Examination.

Bachelor in Medicine, First Examination.

Bachelor in Medicine, Second Examination.

## DOCTOR IN MEDICINE.

## APPLICATION.

## To the Registrar of the University.

SIR,

I request permission to present myself at the ensuing Examination for the degree of Doctor in Medicine.

I am. &c. &c.

Certificate to be signed by the President of the Faculty of Mcdicine.

I certify that ———— has fulfilled the requirements contemplated under para. 8, of the M. D. Regulations.

## LICENCE IN CIVIL ENGINEERING.

## APPLICATION.

To the Registrar of the Calcutta University.

SIR,

I request permission to present myself at the ensuing Examination for a Licence in Civil Engineering.

I am, &c. &c.

## CERTIFICATE.

To be signed by the Principal of the College at which the Candidate has studied.

# BACHELOR IN CIVIL ENGINEERING.

The certificate and application for the Degree of Bachelor in Civil Engineering to be in the same form as the foregoing.

## MASTER IN CIVIL ENGINEERING.

The certificate and application for the Degree of Master in Civil Engineering to be in the same form as for the Degree of Doctor in Law, with the exception that the certificate is to be signed by the President of the Faculty of Engineering.

The

18

# APPENDIX A.

# CERTIFICATES OF PASSING.

Entrance.

I certify that		— duly passed the Entrance Examina-
tion held in the	e month of —	18 , and has been placed in the
- Divis	ion.	
Thc	18	
		Registrar.
	First Exa	mination in Arts.
	Same fo	rm as foregoing.
	Licence	in any Faculty.
This is to ce	rtify that	passed the Examination for a Li-
		Annual Examination in the year 18—
		Division.
	•	
		$Registrar_{ullet}$
University of	Calcutta,	
The	18	
		the Annual Examination in the year ne ————————————————————————————————————
		Registrar.
University of	Calcutta,	
The	18	
	n 11	77 74
		in any Faculty.
		obtained the Degree of
		his University at the Annual Examina-
	: 18—, and the	t he was placed in the ——— Divi-
sion.		
		<i>α</i> , μ
		Chancellor,
		or Vice-Chancellor.
University of	Calcutta,	

Doctor or I	Master in any Faculty.
This is to certify that -	
Doctor or Master in -	in this University at the Annual
Examination in the year 18	
	Chancellor,
	or Vice-Chancellor.
University of Calcutta,	
The 18	
	Bellevin and the second
	Honors.
•	passed the Honor Ex-
	Registrar.
University of Calcutta,	•
The 18	

# APPENDIX B. SUBJECTS IN LANGUAGES.

# ENTRANCE EXAMINATION, 1868.

English.

Tennyson, ... Lord of Burleigh.
Macaulay, ... Horatius Cocles.

Milton, .. Extract from Book V of

Paradise Lost.

Gray, ... { Hymn to Adversity. Ode on the Spring.

Wordsworth, .. Heart-leap Well.

Goldsmith, ... Traveller.

Robertson, .. History of America, Book II.

Smiles, .. Self-Help, Chaps. 12 and 13.

Greek.

Homer, .. Iliad, Books I., II., and III.

Latin.

Cæsar de bello Gallico, Book II.

Eton Electa ex Ovidio

et Tibullo .. Part II—Extracts XXI. to

Cicero, .. De Senectute.

Hebrew.

Book of Genesis.

Sanscrit.

Extracts in Rijupat, Part III. from Hitopadesha, Vishnupurana and Mahábharat.

Upakramaniká,

Bengali.

As in published Selections.\*

Arabic.

Major Fuller's Selections.\*

Persian.

Iqd-i-gul. Pages 1—105.

Iqd-i-Manzum.

Urdu.

Major Fuller's Selections, Part I.\*

Hindi.

Vidyankur.

Ramayana, 3rd and 4th Books.

Oorya.

Hitopadesha, .. Chaps. 2nd and 3rd.

Nobin Chunder Saran-

gee, ... Universal History, Parts 1st

and 2nd.

# ENTRANCE EXAMINATION, 1869.

English.

Cowper, ... Task, Book VI. Winter Walk at Noon.

Goldsmith, .. Edwin and Angelina.

Scott, .. Introduction to Lay of the

Last Minstrel.

Byron, .. Destruction of Sennacherib—Address to the Ocean.

Smith, .. Address to the Mummy in Belzoni's exhibition.

Sold by Messrs. Thacker, Spink and Co.

Defoe, from Extracts Robinson Crusoe.

Dixon, Extracts from Life of Admira

Blake.

Smiles, Self-Help. Chap. X.

Latin.

Virgil, Æneid, Books I and II.

Cæsar de Bello Gallico, Books I and II.

Greek

Xenophon, Cyropædia, Books I and II.

Homer, Iliad, Book I.

Sanscrit.

As in 1868.

Arabic

Major Fuller's Selections.\*

Bengali.

Selections by Rev. K. M. Banerjea.\*

Urdu.

Major Fuller's Selections, Part I.\*

Persian.

Iqd-i-gul. Pages 1—105.

Iqd-i-Manzum.

Hindi

Lallu Lal; Prem Sagar—2nd half Chap. 51-90.

Vidyankur.

Ramayan, 3rd and 4th Books.

\* Thacker, Spink & Co.

Oorya.

Hitopadesha, Chaps. 1 and 2.

Nitibodh by W. Lacey.

Butrish Singhasun.

Hebrew.

As in 1868.

# ENTRANCE EXAMINATION, 1870.

English.

Cowper, ... Timepiece, as in 1861.

Goldsmith, ... Deserted Village.

Campbell, { Battle of Hohenlinden, Lochiel's Warning. The

Mother.

Pollok, ... The Genius of Byron (from the Course of Time)

Byron, . . Address to the Ocean, Battle of Waterloo.

Hemans, ... Casabianca.

Wordsworth, ... The Pet Lamb.

Montgomery, .. Home.

Wolfe, ... Burial of Sir J. Moore.

Browning, ... How they brought the good news from Ghent.

Johnson, ... Rasselas.

The Mirage of Life, as in 1861.

Addison, ... Selected Essays from the Tatler and Spectator. Tatler, Nos. 81, 97, 161.

Spectator, Nos. 26, 69, 93, 94, 111, 120, 121, 135, 159, 195,255,256,257,381,387.

Latin.

Cicero,

.. First and Second Catiline.

Virgil,

.. Æneid, Books I. and II.

Greek.

Xenophon, Homer, .. Anabasis, Books I and II.

. Iliad, Book I.

Sanscrit.

As in 1869.

Arabic.\*

Major Fuller's Selections, as in 1869.

Bengali.

Selections by Rev. K. M. Banerjea, as in 1869.

\* Urdu.\*

Major Fuller's Selections, Part I.

Persian.

Iqd-i-gul, Pages 1—105. Iqd-i-Manzum.

Hindi.

Lallu Lal—Prem Sagur 2nd half chap. 51-90. Vidyankur.

Ramayan, 3rd and 4th Books.

Oorya.

Hitopadesha, chap. 1 and 2. Nitibodh by W. Lacey. Butrish Singhasun.

....

Hebrew.

Book of Genesis.

\* Thacker Spink & Co.

# FIRST EXAMINATION IN ARTS, 1868.

# English.

Thomson,
Addison,
Tickell,
Castle of Indolence.
The Campaign.
Elegy on Addison.

Cowper, .. Table Talk.

Robertson, ... History of America, Book I.

Paley, .. Reasons for Contentment.

Helps,

Extracts from Companions of
my Solitude, and Friends
in Council.

. .

Latin.

Horace, ... { Odes, Books I. and II. Ars Poetica.

Cicero, .. The second Tusculan Dispu-

tation.

Livy, ... Book XXIII.

Greek.

Thucydides, ... Book III.
Plato, ... Crito.
Sophocles, ... Antigone.

Sanscrit.

Extracts in Rijupáth, Part 3, from Hitopadesha, Vishhnupurána, and Mahábhárata. Upakramaniká.

Arabic.\*

Mr. Kempson's Selections.

<sup>\*</sup> Thacker, Spink & Co.

# FIRST EXAMINATION IN ARTS, 1869.

# English.

Milton, ... Paradise Lost, Bks. IV. V. VI.

Byron, ... The Siege of Corinth.

Macaulay, ... Battle of the Lake Regillus.

Addison, ... Spectator, (papers on Milton and on the Pleasures of the

Imagination).

Johnson, ... Lives of the Poets—(Milton

and Addison).

Prescott, ... Book III. Chaps. 4 and 5, vol. II. Philip II.

Latin.

Livy, ... Book IV.
Cicero, ... Pro Sestio.

Horace, ... Book I. Epistles.

Greek.

Herodotus, ... Clio. Euripides, ... Alcestis.

Sunscrit.

As in 1868.

Arabic.\*

Mr. Kempson's Selections.

# FIRST EXAMINATION IN ARTS, 1870.

# English.

Milton, ... Paradise Lost, Bks. I. and II.

Addison. Cato with Popo's Prologue

Addison, ... Cato, with Pope's Prologue.
Pope, ... Essay on Criticism as it

... Essay on Criticism, as in 1864.

\* Thacker, Spink & Co.

Macaulay, ... Lay of Virginia.
Johnson, ... Life of Pope.

Addison, ... Papers on Paradise Lost from the Spectator, Nos. 267, 273, 279, 285, 291, 297,

303, 309.

Johnson, ... Papers in the Rambler on Milton's Versification, Nos.

86, 88, 90, 94.

Robertson, ... Charles V. Book I.

Latin.

Livy, ... Book XXII.

Cicero, ... De Finibus, Book I.

Horace, ... { Odes, Books III. and IV. Ars Poetica.

Greek.

Herodotus, ... Euterpe, Book II.

Euripides, ... Medea. Sanscrit.

Kumára Sambhava.

Veni Sánhára, ... (Omitting 2nd Act).

Arabic.\*

Mr. Kempson's Selections.

# B. A. EXAMINATION, 1869.

# English.

Shakspeare, ... Midsummer Night's Dream.

Scott, ... Rokeby.

\*Wordsworth, ... { Egyptian Maid. Tintern Abbey.

\* Thacker, Spink & Co.

\*Gibbon, ... Rome, Chapters 1 and 2.

\*Burke, ... Speech on Financial Reform.

\*Campbell, ... Rhetoric, Book II. Chapters

5 and 6. Book III. Chapter

I. Secs. 1 and 2.

# Greek.

Sophocles, ... Ajax.

Herodotus, ... Euterpe, Book II.

Latin.

Tacitus, ... Annals, Book I.

Cicero, ... Pro Cluentio.

Juvenal, ... Satires 1, 3, 4, 8, 14.

Horace, ... Odes, Book IV.

Virgil, ... Æneid, Books 7 and 8.

# Hebrew.

Deuteronomy.

Psalms I.—XLI.

İsaiah I.—XXXIX.

Daniel I.—VII.

Proverbs.

# Sanscrit.

Kumára Sambhava.

Veni Sanhára, ... (Omitting 2nd Act).

# Arabic.†

Taríkh i Yamíní, Hamásah, first 31 pages. Mutanabbi,

As contained in Selections
by Major Lees.

<sup>\*</sup> Published in one volume by Messrs. Thacker, Spink and Co + Thacker, Spink & Co.

# B. A. EXAMINATION, 1870.

# English.

Julius Cæsar. Shakspeare, Milton, Comus and Sonnets. Chaucer. Gower. Howard, Earl of Surrey, Spenser, Coleridge, Moore, Selections\* from Shelley, Keats. Pollok, Macaulay, Tennyson, Smith, Bacon, Advancement of Learning, Book 1. Essays on Clive and Hastings. Macaulay, \*Campbell, Rhetoric as in 1869. \*Gibbon, Selections from Chaps. LI. and LII, of the Decline and Fall.

# Latin.

Virgil, ... Georgics, Book IV.

Juvenal, ... Satires VII and X.

Tacitus, ... Annals, Book I.

<sup>\*</sup> Published in a separate volume by Thacker, Spink & Co.

Greek.

Thucydides, Sophocles, ... Book I.

... Crito.

Sanscrit.

As in 1869.

Plato,

Arabic.\*

Taríkh i Yamíní, Hamásah, first 31 pp. Mutanabbi,

As contained in Selections by
Major Lees.

# B. A. EXAMINATION, 1871.

# English.

Shakspeare,

... Macbeth.

Milton,

... Lycidas, L' Allegro and Il Penseroso.

\*Collins,

... Ode on the Passions.

\*Pope

... On Virtue (from the Essay on Man).

\*Gray,

... The Bard.

\*Scott,

... Lines on Pitt and Fox, from the Introduction to Marmion, as in 1862.

\*Byron,

.. Ancient and Modern Greece.
The Isles of Greece. Midnight (from Manfred).

Rome.

\*Shelley,

... Lines written among the Euganean Hills.

<sup>\*</sup> Thacker, Spink & Co.

\$3.4.4.4.4.4			
*S. T. Coleridge,	•••	The Ancient Mariner, Hymn before Sunrise.	
*H. Coleridge,	•••	The Nautilus.	
*Keats,	•••	Ode to a Nightingale. Ode to	
,		Autumn.	
*Wordsworth,		Laodamia.	
Bacon,	•••	Essays. Wright's Edition.	
Macaulay,	•••	Essay on Bacon.	
*Campbell,	•••	Rhetoric as in 1870.	
*Plutarch,		Lives of Alexander and Cæsar.	
		Clough's Edition.	
		Latin.	
Tacitus,		Historics, Book I.	
Virgil,	• • • • • • • • • • • • • • • • • • • •	Æneid, Books V. and VI.	
Juvenal,		Satires, III. and X.	
		Greek.	
Thucydides,		Book I.	
Sophocles,	•••	Œdipus Rex.	
Plato,	•••	Republic, Book I.	
	S	Sanscrit.	
Kumára Sambhava	a.		
Veni Sanhara,	•••	(Omitting 2nd Act).	
	4	Arabic.*	
Taríkh-i-Yamíní,		As contained in	
Hamásah, the first	t 31 p		
Mutanabbi,		Major Lees.	
HON	OR EX	AMINATION, 1869.	

# HONOR EXAMINATION, 1869.

English Poetry.

Chaucer,

Selections by Morris (Clarendon Press Series).

<sup>\*</sup> Thacker, Spink & Co.

Spenser,	Faerie Queene, Book II. Chaps. I. and II.
Pope,	Dunciad, Book IV.
Collins,	As in Richardson's Selections.
C 0111115,	Prelude, Books I. and II.
Wordsworth,	Ode on the Intimations of Immortality, &c.
Tennyson,	Idylls of the King, the last.
Palgrave,	Golden Treasury, Book IV.
0 .	The Drama.
Shakspeare,	·· { Twelfth Night. Hamlet.
Ben Jonson,	The Fox.
Sheridan,	The Critic.
Byron,	Manfred.
Taylor,	Philip Van Artevelde, Part I.
	Prose.
Milton,	Areopagitica.
Burke,	Thoughts on the Cause of the
Gibbon,	present Discontents.
Globon,	State of Ancient Germany
	(being Chapter IX. of the
Hume,	Decline and Fall.)
Scott,	Reign of Edward I.
· ·	Kenilworth.
Carlyle,	Heroes and Hero Worship,
	the part treating of Doctor
C 1. 13	${f Johnson}$ .
Campbell,	Rhetoric, Book II. Chapters
	IV. V. VI. VIII. and IX.
	and the later

and the whole of Book III.

# HONOR EXAMINATION, 1870 AND 1871.

English Poetry.

Selections Edited by Morris, Chaucer, (Clarendon Press Series.) Faerie Queene, Book I. Can-Spenser, tos 3, 4, 5. Induction to the Mirror of Sackville, Magistrates. Dryden, The Hind and the Panther. English Bards and Scotch Byron, Reviewers. Ode to Napoleon Buonaparte. Idylls of the King. Tennyson, Palgrave, Golden Treasury, Book III. Dramn. Shakspeare, As you like it. All's well that Ends well. ,, Henry IV. Part 2. Ben Jonson. Catiline. Shelley, Hellas. Prose. Sir Thomas Malory, Knt. La Mort D'Arthure, Wright's Edition, Vol. 3, Chap. 113 to end. Sir Thomas Browne, ... Hydriotaphia. Speech on Fox's East India Burke, Rill The Antiquary. Scott, On the Conduct, of the Hu-Locke, man Understanding.

De Quincey,

Confessions of an Opium

Eater.

## Greek.

Homer, .. Iliad, first twelve Books.

Pindar, .. Olympic Odes.

Æschylus, ... Prometheus and Agamemnon.

Sophocles, ... Œdipus Tyrannus and Anti-

Euripides, ... Hecuba and Medea.

Aristophanes, .. Knights, Clouds and Frogs.

Herodotus, ... Books II. and III. to the end of Chap. 66.

Thucydides, ... Books VI. and VII.

Demosthenes, ... Orations against Leptines and Meidias.

Plato, ... Republic.

Aristotle, ... Politics.

# Latin.

Virgil, ... Georgies; Æneid, first six
Books

Horace, ... Odes, Epodes, Satires 1, (except 2 and 8) Epistles I.

De Arte Poetica.

Juvenal, ... Satires, (except 2, 6, 9).

Persius, ... Satires.

Lucretius, ... Books I. and VI.

Catullus, ... 1, 2, 3, 4, 9, 12, 22, 30, 31, 46, 49, 51, 63, 64, 65, 66.

Plautus, ... Aulularia.

Terence, ... Andria.

Livy, ... Books XXI to XXV.

Sallust, ... Bellum Catilinarium.

Cicero,

... Orations against Catiline, first book of letters to Atticus, and De Officiis.

Tacitus,

.. Histories.

# HONOR EXAMINATION, 1869.

## Sanscrit.

Kálidása, ... Meghaduta and Vikramorvási.

Bhavabhuti, ... Viracharita and Uttararáma Charita.

Sudraka, ... Mrichchhakatika.

Vána Bhatta, ... Kadambari.

Bháravi, ... Kiratarjuniya II. III. XI—XIV.

Mágha, ... Sisupalabadha II. XIII.XVI.

Sriharsa, ... Naishadha Charita III—VI. VIII—X. XVII.

Mammatha Bhatta, ... Kávya Prakása.

Vishwanátha Turka-

panchanana, ... Bháshá Parichchheda and Siddhánta Muktávali.

Vachaspati Misra, ... Tattwa Kaumudi.

Pánini, ... Káraka, and Taddhita as in the Siddhanta Kaumudi.

# HONOR EXAMINATION, 1870.

# Sanscrit.

Kálidása, ... Vikramorvási.

Bhartrihari, ... Bhatti Kávya I.—V.

Visákha Datta, ... Mudrá Rákshasa.

Sudraka, Vána Bhatta, Srí Harsha, Mágha,

... Kadambari, first half.

Mrichchhakatika.

.. Naishadha, V. IX. XVII.... Sisupálabadha, I. III. XIV.

Vyasa and Sankara, ... Sisupatabadna, 1. 111. ATV.

Vedánta Sutras with Sánraka

Bháshya I. Adhyáya 2nd Páda.

Rig Veda Sanhita, Mammota Bhatta,

... 1 Ashtaka 1 to 4 Adhyáyas.... Kávya Prakása, I.—V. Ul-

lásas.

Vishwanátha Turkapanchanana,

... Bháshá Parichchheda and Siddhánta Muktávali.

Vachaspati Misra, Pánini, ... Tattwa Kaumudi.

... Káraka, and Taddhita as in the Siddhánta Kaumudi.

Arabic.

Hammasoah, Motanabbi, Makamát-ī-Hariri, Saba-i-Moallakah, HONOR EXAMINATION, 1869 AND 1870.

# History.

As a period:-

1. The History of Europe during the 16th century. It is recommended that the following authors and books be consulted—

For History of England.—Hume, Froude, Charles Knight.

For France.—Michelet, Crowe.

- " Spain.—Robertson's Charles V. Prescott's Philip II.
- " Italy.—Roscoe's Leo X. Sismondi's Italian Republics.
- " Holland.—Motley's Rise of the Dutch Republic. " United Netherlands.
- " Germany.—Ranke's History of the Reformation. " Ferdinand I and Maximilian of Austria.
- 2. Constitutional History of England (as in Hallam).
- 3. History of Modern Civilization (as in Guizot).
- 4. Political Economy.
- 5. Taylor's Historical Evidence.

Text-books in Arts.

History.

ENTRANCE EXAMINATION.

Marshman's History of India, Vol. I.

Yonge's Landmarks of Ancient History (omitting Introductory Chapter).

FIRST EXAMINATION.

Student's Hume.

# B. A. EXAMINATION.

Elphinstone's History of India.

Macfarlane's "British India," or Marshman's Vol. 2 of History of India.

Schmitz's Greece and Rome.

History of the Jews, as in Taylor's Manual of Ancient History, Chapter 5, and Chap. 22, Section VII.

Mental and Moral Science.
Payne's Elements of Mental Philosophy.
Wayland's Moral Philosophy.
Whately's Elements of Logic.

 ${\it Zo\"{o}logy~and~Comparative~Anatomy}.$  Milne Edward's Zoology, 2 parts.

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The Rev. W. C. Fyfe.

Capt. P. Dods.

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Baboo Rajendra Lala Mitra.

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Koomar Harendra Krishna, Rai Bahadoor.

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The Hon'ble A. Eden, C. S.

John Strachey, Esq., C. S.

Baboo Juggadanund Mookerjee, Rai Bahadoor.

The Rev. E. C. Stuart, B. A.

The Rev. W. C. Fyfe.

Capt. P. Dods.

Baboo Ketter Mohun Chatterjee.

Baboo Ramchunder Mitter.

Baboo Peary Chund Mitter.

Rev. J. Barton, M. A.

Whitley Stokes, Esq.

H. F. Blanford, Esq.

Baboo Bhoodeb Mookerjea.

Baboo Prosunno Coomar Surbadhicarry.

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The Most Rev. Walter Steins, D. D.

The Rev. T. Skelton, M. A.

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The Rev. J. P. Ashton, B. A.

J. A. Aldis, Esq., M. A.

J. Sime, Esq., B. A.

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W. Theobald, Esq.

F. L. Beaufort, Esq.

The Hon'ble A. G. Macpherson.

W. A. Montriou, Esq.

T. H. Cowie, Esq.

Kumar Hurendra Krishna, Rai Bahadoor.

Moulvie Abdool Luteef Khan, Bahadoor.

The Hon'ble L. S. Jackson.

The Hon'ble George Campbell.

Syed Azeem-ood-deen Hossein Khan, Bahadoor.

Baboo Juggadanund Mookerjee, Rai Bahadoor.

Whitley Stokes, Esq.

The Hon'ble C. P. Hobhouse.

The Hon'ble Dwarkanath Mitter.

Sir. R. Temple, K. C. S. I.

Baboo Unoocool Mookerjee.

# THE FACULTY OF MEDICINE.

President.

F. N. Macnamara, Esq., M. D.

Members.

F. J. Mouat, Esq., M. D., F. R. C. S.

J. Fayrer, Esq., M. D., F. R. C. S.

Norman Chevers, Esq., M. D.

S. B. Partridge, Esq., F. R. C. S.

S. G. Chuckerbutty, Esq., M. D.

T. Anderson, Esq., M. D.

Hugh Macpherson, Esq., M. A.

Baboo Chunder Coomar Day, M. D.

J. P. Brougham, Esq., M. D.

N. C. Macnamara, Esq.

A. J. Payne, Esq., M. D., B. A.

J. Ewart, Esq., M. D.

Charles Palmer, Esq., M. D.

W. K. Waller, Esq., M. D.

# -----

# THE FACULTY OF ENGINEERING.

President.

Lieut.-Col. J. E. T. Nicolls, R. E.

Members.

His Excellency the Commander-in-Chief.

Col. the Hon'ble Sir H. M. Durand, C. B., K. C. S. I.

T. Oldham, Esq., LL. D.

J. Sutcliffe, Esq., M. A.

Captain E. C. S. Williams, R. E.

Lieut.-Col. R. Strachey, R. E.

Major G. Chesney, R. E.

The Venerable Archdeacon J. H. Pratt, M. A.

W. S. Atkinson, Esq., M. A.

Major W. E. Warrand, R. E.

Thomas Martin, Esq., C. E.

Lieut.-Col. C. H. Dickens, R. A.

Colonel H. E. L. Thuillier.

Colonel J. E. Gastrell.

Registrar.

J. Sutcliffe, Esq., M. A.

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# SUCCESSION LISTS FROM 1857.

CHANCELLORS.

1857. The Right Hon'ble Charles John Earl Canning.

1862. The Right Hon'ble the Earl of Elgin and Kincardine, K. T., G. C. B.

1863. The Right Hon'ble Sir John Laird Mair Lawrence, Bart., G. C. B., K. S. I.

VICE-CHANCELLORS.

1857. The Hon'ble Sir James William Colvile, Knight.

1859. The Hon'ble William Ritchie.

1862. The Hon'ble Claudius James Erskine.

1863. The Hon'ble Henry Sumner Maine, LL. D.

1867. The Hon'ble W. S. Seton-Karr.

# REGISTRARS.

1857. William Grapel, Esq., M. A.

1858. H. Scott Smith, Esq., B. A.

1862. { J. G. Medlicott, Esq., B. A. Rev. J. Richards, M. A. } Officiating.

1863. H. Scott Smith, Esq., B. A.

1864. J. Sutcliffe, Esq., M. A. Officiating.

1865. J. Sutcliffe, Esq., M. A.

# EXAMINERS FOR 1867-68.

# Entrance Examination.

	$\left\{egin{array}{l}  ext{R. Parry, Esq.} \  ext{J. Bruce, Esq.} \  ext{C. R. Cooke, Esq.} \  ext{J. Wilson, Esq} \end{array} ight.$
Bengali,	Pundit Ramgoti Nyaratna Baboo Gopal Chandra Banerje Rev. Lal Behari De. Baboo Bipru Charan Chakarvat
History & Geograph	J. K. Rogers, Esq. H. Roberts, Esq. Rev. B. Larcher.
Mathematics,	J. M. Scott, Esq. W. G. Willson, Esq. M. Mowat, Esq. C. A. Martin, Esq.

# First Arts and B. A. Examinations.

English, {	C. H. Tawney Esq., Rev. F. R. Vallings.
Bengali and Sanscrit, {	Rev. K. M. Banerjea. Pundit Mahes Ch. Nyaratna.
History, {	Rev. W. C. Fyfe. R. Hand, Esq.
Mathematics and Natural Philosophy,	E. Willmot Esq. M. H. L. Beebce, Esq.
Mental and Moral Science,	A. W. Croft, Esq. George Smith, Esq.
Physical Science,	S. B. Partridge, Esq. H. F. Blanford, Esq.

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Entrance, First Arts, and B. A. Examinations.
                   ... { Rev. L. Veys. J. Sime, Esq.
Classics,
                       `Baboo Krishna Kamal Bhatta-
Hindi and Oorya,
                           chariva.
Arabic, Persian & Hindi, H. Blochmann, Esq.
      Honor and M. A. Degree Examinations.
                    ... { Rev. F. R. Vallings. C. H. Tawney, Esq.
English.
                   Rev. K. M. Banerjea.
Pundit Mahes Chandra Nyayaratna
Rev. W. C. Fyfe.
R. Hand, Esq.
Sanscrit,
History,
                    ··· \ E. Willmot, Esq. ··· \ M. H. L. Beebee, Esq.
Mathematics,
Mental and
                Moral J. A. W. Croft, Esq.
                    ... George Smith, Esq.
  Science.
Natural and Physical S B. Partridge, Esq.
                    ... H. F. Blanford, Esq.
  Science,
                          LAW.
            B. L. and L. L. Examinations.
J. H. Branson, Esq... C. J. Wilkinson, Esq.
                        MEDICINE.
   L. M. and B. M. First and Second Examinations.
                         S. B. Partridge, Esq.
Anatomy,
Physiology and Com-
   parative Anatomy,
                        J. A. P. Colles, Esq. M. D.
Botany and Materia
   Medica,
                         T. Anderson, Esq. M. D.
Medicine and Mid-
  wifery,
                        J. Ewart, Esq. M. D.
Surgery and Ophthal-
  mic Surgery,
                        J. Fayrer, Esq. M. D.
Chemistry and Medi-
  cal Jurisprudence, F. N. Macnamara, Esq. M. D.
         L. C. E. and B. C. E. Examinations.
Captain Pemberton. Mr. Ormsby. Mr. Sutcliffe.
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REGULATIONS REGARDING ACADEMICAL COSTUME.

Graduates shall wear a European dress with a College Cap, or a white Chapkan and Trowsers with a Shawl Pagree and black Taz. They also shall wear Gowns and Hoods for the several degrees, as described below—

# For the Degree of B. A.

A black silk or stuff gown. The Hool shall be of black silk or stuff, edged on the inside with a border of dark blue silk.

# For the Degree of B. L.

A black silk or stuff gown. The Hood shall be of black silk or stuff, edged on the inside with a border of green silk.

# For the Degree of B. M.

A black silk or stuff gown. The Hood shall be of black silk or stuff, edged on the inside with a border of scarlet silk.

# For the Degree of B. C. E.

A black silk or stuff gown. The Hood shall be of black silk or stuff, edged on the inside with a border of orange-coloured silk.

For the Degree of Doctor or Master in any of the Faculties.

A black silk or stuff gown. The Hood shall be of black silk or stuff, with a lining of silk corresponding in colour with the inside border of the Hood for Bachelors of the Faculty.

# Endowments.

### PREMCHAND ROYCHAND STUDENTSHIPS.

Premchand Roychand, Esq., of Bombay, in a letter to the Government of India, offered to make a donation of two lakhs of Rupees to the Calcutta University, and on the 9th February, 1866, paid over this amount to the Government of India, to be transferred to the University, and held by it as a Body Corporate under Section 2, of Act II. of 1857. Mr. Premchand Roychand further expressed a hope, "that the money should be devoted to some one large object, or to a portion of some large object, for which it might in itself be insufficient."

The Senate, at a Meeting on the 21st July, •1866, accepted Mr. Premchand Roychand's munificent donation, and directed that it should be invested in 5 per cent. Government Securities. The Senate also sanctioned the following plan for appropriating the proceeds of the donation—

- 1. Five Studentships, to be called Premchand Roychand Studentships, of Rupees 2,000 a year each, to be founded and maintained by the interest of the two lakes, and its accumulations during the next five years.
- 2. Any M. A. of this University to be eligible for one of these Studentships during eight years from the time that he passed the Entrance Examination.

- 3. Such Studentship to be tenable for five years, and one election to be made annually after Examination.
- 4. Candidates to give notice of intention to appear six months before the Examination, and to select not more than five of the following subjects, each to receive a maximum of 1,000 marks:—
  - 1. English.
  - 2. Latin.
  - 3. Greek.
  - 4. Sanscrit.
  - 5. Arabic.
  - 6. History of Greece, Rome, England and India; and a general view of the History of Modern Europe from Guizot, Hallam, &c. To include Political Economy.
  - 7. Moral Sciences:—viz. Ethics, Mental Philosophy, Logic,
  - 8. Pure Mathematics.
  - 9. Mixed Mathematics.
  - 10. Physical Science.
- 5. The names of the Students to be printed in the Calendar after the Fellows, and after them the names of Ex-Students.

## DUFF SCHOLARSHIPS.

The Subscribers to a Fund, raised for the purpose of commemorating the services of the Rev. Dr. Duff, directed the investment of the amount collected (Rupees 20,000) in Government Securities; and offered

to transfer the same to the University of Calcutta on the following conditions:—

- 1. The interest of the money shall be applied to establish—
- I. A Scholarship of Rupees 15 a month, tenable for one year by the student, who shall obtain in the First Arts Examination the highest number of marks for Languages.
- II. A Scholarship of Rupees 15 a month, tenable for one year by the student, who shall obtain in the First Arts Examination the highest number of marks for Mathematics.
- III. A Scholarship of Rupees 15 a month, tenable for one year by the Student, who, having been educated for at least one year in the Free Kirk Institution, shall obtain the highest number of marks in all the subjects of the First Arts Examination taken together.
- IV. A Scholarship of rupees 15 a month, tenable for one year by the Student, who, being a Christian in religion and having been educated for at least one year in any of the affiliated Institutions for the education of Europeans and Eurasians, shall obtain the highest number of marks in all the subjects of the First Arts Examination taken together.
- 2. The above Scholarships shall be called "Duff Scholarships," and shall be tenable with any other Scholarships.
- 3. The surplus of the Funds, after paying any small incidental expenses, shall be suffered to accumulate, and used for the purpose-of giving rewards to any students of the University, who shall pass with credit

in the Evidences of Revealed Religion, Natural Theology, and Moral Philosophy in the Examination for Honors, or for the degree of M. A., such rewards to be called "Duff Prizes."

- 4. Should the accumulations appear to the Syndicate greater than is necessary to carry out Rule 4, they may add to the value of the Duff Scholarships or increase their number.
- 5. The Syndicate shall have the power of putting a fair interpretation on any doubtful point in the above rules.

The Senate, at a Meeting on the 21st July, 1866, accepted this benefaction from the Subscribers of the Duff Memorial Fund.

# INSTITUTIONS AFFILIATED TO THE UNIVERSITY.

# (Connected with Government.)

- 1. Presidency College, Calcutta, (In Arts, Law, and Civil Engineering)
  - 2. Medical College, Calcutta.
  - 3. Hooghly College, (In Arts and Law.)
  - 4. Dacca College, (In Arts, and Law.)
  - 5. Kishnaghur College, (In Arts and Law.
  - 6. Berhampore College, (In Arts and Law.)
  - 7. Agra College.
  - 8. Benares College.
  - 9. Saugor School.
  - 10. Sanscrit College.
  - 11. Ajmere School.
  - 12. Bareilly College.
  - 13. Patna College, (In Arts and Law.)
  - 14. Thomason College, Roorkee.
  - 15 Lahore Government College.
  - 16. Delhi Government College.
  - 17. Gowhatty School.
  - 18. Calcutta Mudressa.
  - 19. Cuttack School.

# (Unconnected with Government.)

- 2). Canning College, Lucknow.
- 21. Bishop's College.
- 22. Doveton College, Calcutta.
- 23. St. Paul's School.
- 24. Free Church Institution, Calcutta.
- 25. La Martiniere College, Calcutta.
- 26. London Missionary Society's Inst., Bhowanipore.

- 27. Serampore College.
- 28. Queen's College, Colombo.
- 29. St. Xavier's College, Calcutta.
- 30. St. John's College, Agra.
- 31. Joy Narain's College, Benares.
- 32. St. Thomas's College, Colombo.
- 33. St. Stephen's College, Delhi.
- 34. General Assembly's Institution, Calcutta.
- 35. Lahore Mission School.
- 36. Cathedral Mission College, Calcutta.
- 37. Victoria College, Agra.
- 38. Church Mission School, Umritsur.
- 39 Bishop's School, Simla.
- 40. Christ Church School, Cawnpore.
- 41. Sehore School.

### AFFILIATION.

- 1. Institutions, or departments of Institutions, may be affiliated in Arts, Law, Medicine, and Civil Engineering.
- 2. The power of affiliating rests, under the sanction of the Governor-General of India in Council, with the Syndicate, to whom all applications for affiliation must be addressed through the Registrar.

In the case of a Government Institution, application must be made by the Director of Public Instruction, or other Chief Educational officer of the province in which the Institution is situated.

In the case of any other Institution, application must be made by the chief controlling authority of such Institution.

Every application must be countersigned by two Members of the Senate, and, if thought necessary in the case of distant Institutions, by the Secretary to the Government of the Province in which the Institution is situated.

- 3. The application must contain:
- (a) A declaration that the Institution has the means of educating up to the standard under which it desires to be affiliated.
- (b) A statement shewing the provision made for the instruction of the students up to the same standard.
- (c) Satisfactory assurance that the Institution will be maintained on the proposed footing for 5 years at least.
- 4. The Syndicate may, with the sanction of the Governor-General of India in Council, at any time, with draw the privilege of affiliation from any Institution.

# Presidency College.

AFFILIATED, 1857.

The Presidency College was established on the 15th June, 1855, under orders from the Hon'ble the Court of Directors in their Despatch No. 62, dated 13th September, 1854, and is under the control of the Director of Public Instruction of Bengal.

The College is open to all classes of the community, and the course of instruction is adapted to the requirements of the University for Degrees in Arts, Law and Civil Engineering.

General Department.—Students who have passed the University Entrance Examination are admissible to this Department.

There is an admission fee of 10 Rs. and the monthly tuition fee is 12 Rs., except in the case of students holding Junior Scholarships, who pay only 5 Rs. a month.

Seven Scholarships, founded in commemoration of the donors whose names they bear, are attached to the College, and are tenable by Graduates in Arts for one year after taking the Degree of B. A. viz.

The Burdwan Scholarship,... value 50 Rs. a month.

- " Dwarkanath Tagore " ... " 50 Rs. "
- " Bird Scholarship, ...... " 40 Rs. "
- " Ryan " ...... " 40 Rs. "
- Three Hindu Coll. Scholarships, ,, 30 Rs. ,

Law Department.—Students are admissible to this partment who have passed the First Examination in Arts. Candidates for admission, who are not already members of the General Department, are required to pay an Entrance fee of 10 Rs. During the first two years, students pay a monthly tuition fee of 5 Rs., and during the third year they pay 10 Rs. a month.

Civil Engineering Department.—Students are admissible to this Department, who have passed the University Entrance Examination. The Entrance fee is 10 Rs. and the monthly tuition fee 5 Rs. There are two Scholarships, each worth 10 Rs. a month, attached to this Department, which were founded in memory of the late Major General Forbes. These Scholarships are tenable for one year, and are awarded after the annual College Examination in May to the most deserving students in the second year class. Five Government Scholarships, each worth 50 Rs. a month and tenable for two years, are available

annually for students who pass the University Examination for the Licence in Civil Engineering, or the degree of B. C. E. Holders of these Scholarships receive practical raining, (1) in the Government Survey Department for six months; (2) in Government workshops for six nonths; (3) in Government works in progress for one year. Other students, who pass the University Examination but for whom no Scholarships are available, are allowed to go through the same course of practical training free of charge.

# Instructive Staff.

# General Department.

Mr. J. Sutcliffe, M. A., Principal and Professor of Mathematics.

Mr. J. Sanders, Professor of English Literature.

Mr. A. W. Croft, M. A., Offg. Professor of Mental and Moral Philosophy and Logic.

Mr. H. F. Blanford, Professor of Natural Science.

Mr. C. H. Tawney, M. A., Professor of History.

Mr. M. L. Beebee, B. A., Professor of Nat. Phil. and Astronomy.

Baboo Kisto Comul Bhuttacharjee, B. A., Professor of lanscrit.

Dr. Robson, Assist. Prof. of Eng. Literature.

Mr. E. R. Ives, B. A. ditto ditto.

Baboo Peary Churn Sircar, Assist. Prof. of History.

Baboo Raj Krishna Bancrjee, Assist. Prof. of Sanscrit.

# Law Department.

Mr. H. C. Marindin, Professor of English Law.

Mr. T. D. Ingram, Professor of Jurisprudence and Indian Law.

# C. E. Department.

Mr. F. Hill, C. E., Professor of Civil Engineering.

Mr. J. M. Scott, C. E., B. A., Assist. Prof. of C. Eng.

Mr. C. Grant, Drawing Master.

# Medical College of Bengal.

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#### AFFILIATED 1857.

1. The Medical College of Bengal was founded by Lord William Bentinck, in the year 1835.

The government of the College and Hospital is vested in the Principal, aided by a Consultative Council, composed of all the Professors, subject to the general control of the Director of Public Instruction.

### THE PRIMARY OR ENGLISH CLASS.

This class consists of Scholarship-holders, free Students and paying Students. The number of free Students in the College, at one time, is limited to 50, and nomination to the free list has been left, by the Director of Public Instruction, in the hands of the Principal.

Free presentations are made entirely with reference to the ability of applicants, as shown by the position they may have held at the Entrance Examination in Arts of the University, or by possession of Scholarships from other Colleges. Paying Students are required to pay an admission fee of Rs. 15, and 5 Rs. per mensem during their stay in the College.

They are required to follow the curriculum of the College as laid down for the primary or English class, and are subject to the same rules regarding discipline.

Students who do not intend to graduate at the Calcutta University, or who are desirous of attending single courses of lectures, may enter as casual students; they are not required to follow the College curriculum, but in other respects are amenable to the College Regulations If they enter for more than a single course of lectures, they are required to comply with the rules which regulate the admission of other applicants to the primary class.

Casual students pay in advance fees of Rs. 40 for each course of lectures, and Rs. 60 for each six months' attendance on the different departments of hospital practice.

The expenditure on Scholarships of the primary class is limited to Rupees (400) four hundred a month, and this sum is ordinarily distributed among the students of the five years as follows:

To \*Students of the 4th and 5th years, 14

<sup>\*</sup> For Students of these two years, University Scholarships are also available, and, for those of the 5th year, the Goodeve Scholarship likewise.

Scholarships at 8 Rs. a month, ........ 64 0 0 To Students of the 1st year, ditto ditto ditto, 64 0 0

Total, per mensem, ......Rs. 400 0 0

The Senior Scholarships are awarded according to the results of the "First Licentiate Examination." But they are not awarded to Students who gain University Scholarships at such Examination. They are tenable for two years, on condition that the conduct and progress of the holder are satisfactory.

The Junior Scholarships are awarded either upon the published results of the University Entrance Examination, or on a Special Examination to be held for the purpose, according as may be found from time to time most convenient. They are tenable for three years, on the like condition as above.

In the event of a Scholarship being forfeited, the amount already drawn is not liable to be refunded by the helder.

Any Scholarship falling vacant by the death, resignation, &c. of the holder, may be awarded to Students of the same term, next in order of merit, who may be without a Scholarship, and may be possessed of the requisite qualifications.

The Goodeve Scholarship (value Rs. 12 a month) may be held in conjunction with any Scholarship awarded under these Rules.

Students of this class, excepting casual students, are required to follow the subjoined curriculum, which is framed for obtaining the Calcutta University Licence in Medicine and Surgery.

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1st year.	2nd year.	3rd year.	4th year.	5th year.
Descriptive and Surgical Anatomy.  General Anatomy and Physiology. Dissections. Chemistry.  Botany.	Descriptive and Surgi. Descriptive and Surgi. Comparative cal Anatomy.  General Anatomy.  Physiology.  Dissections.  Botany.  Descriptive and Surgi. Comparative and Anatomy.  Elevations.  Physiology.  Dissections.  Chemistry.  Botany.  Materia Medica.  Practical Pharmacy.	Descriptive and Surgi. Comparative Anatomy Medicine, cal Anatomy.  General Anatomy.  Physiology.  Botany.  Descriptive and Surgi. Comparative Anatomy Medicine, surgery and Zoology.  Physiology.  Physiology.  Physiology.  Practical Chemistry.  Botany.  Materia Medica.  Practical Chemistry.  Materia Medica.  Botany.  Practical Pharmacy.	(including ope- urisprudence. of regions and ance of Surgi- rations on the dy.	Medicine.  Surgery (including ope-Surgery (including operations)  Midwifery.  Medical Jurisprudence.  Dissection of regions and Midwifery.  performance of Surgi: Medical Jurisprudence.  cal operations on the Dentistry.  dead body.  Dissection of regions and performance of Surgical operations on the beformance of Surgical operations on the dead body.
		Hospital and Dispensary attendance.  Medical Wards   continue   Honor     Honor   Honor     Honor   Honor     Honor	tnie and Chni. Instruction.	Practical Midwifery.  Medical Wards col.  Jec. Sunding Surgical Gind.  Surgical do. do.,  Mith of the and Midwifery.  Mith of the and Midwifery.  Mith of the and Midwifery.  Mith of the and
Norg Students a	re recommended also t	Norg.—Students are recommended also to attend Loctures on Grace	m and Mad	

Nors.—Students are recommended also to attend Lectures on Surgery and Medicine, or any of the Junior Subjects, with which they may not feel themselves familiar, during their third year.

### MILITARY OR HINDUSTANI CLASS.

The instruction of this class is conducted in Urdu.

2. The course of Study is not prescribed by the University, but is in accordance with the order of the Government of India, and is as follows.

First year.	Second year.	Third year.	
Anatomy. Dissection. Materia Medica. Practical Pharmacy.	Anatomy, Dissection. Materia Medica. Medicine. Surgery, Practical Pharmacy.	Clinical Medicine. Clinical Surgery, Dissection of Surgica Regions.	
	Surgical Wards,	Medical Wards, months, 6 Surgical Wards, months, 6	

- 3. If duly qualified, the Student receives a certificate, signed by the Principal, the Professors of Medicine, Surgery, Materia Medica, and Anatomy, and by the native teachers of these subjects, declaring that he is sufficiently versed in Anatomy, Materia Medica, Practice of Medicine and Surgery, to qualify him for the office of native Doctor.
- 4. The Students of this class are all natives, chiefly Mussulmans, and are duly enlisted as Soldiers from the date of their joining the College. They are destined for employment chiefly in Military, but also in civil hospitals and Dispensaries.

#### THE BENGALI CLASS.

The instruction of this class is conducted in the Bengali language.

The course of Study is not prescribed by the University, but is in accordance with the orders of Government.

The course of Study of this class is precisely similar to that of the Hindustani class, the only difference being that the Bengali language is employed, instead of the Urdu, as a medium of communication.

The Students remain the same time in the College, undergo similar Examinations, and obtain the same description of certificate of qualification.

The Students of this class are destined for employment as native doctors in the civil hospitals of Bengal, whilst many engage in private practice, instead of entering Government service.

# PRESENT STAFF OF PRIMARY OR ENGLISH CLASS.

Principal, N. Chevers, M. D. Professor of Anatomy and Physiology and Curator of \ J. Ewart, M. D. the Museum, Professor of Comparative ) J. Ewart, M. D. Anatomy and Zoology, Professor of Descriptive and S. B. Partridge, F. R. Clinical Surgery, 1st Demonstrator of Ana- \ Sub-Asst. Surgeon, Niltomy, madhub Mookerjee. Sub-Asst. Surgeon, Chun-2nd ditto ditto ditto. der Mohun Ghose, M. B. Professor of Botany, T. Anderson, M. D.

Professor of Materia Medica, S. G. Chuckerbutty, M. D.

Professor of Chemistry,

F. N. Macnamara, M. D.

Professor of Medicine,

N. Chevers, M. D.

Professor of Surgery,

J. Fayrer, M. D., F.R.C.S.

Professor of Midwifery,

T. E. Charles, M. D.

Professor of Medical Juris prudence,

C. T. O. Woodford, M. D.

Professor of Ophthalmic \ N. C. Macnamara. Medicine and Surgery,

Professor of Dentistry,

J. P. Smith, M. D.

Professor of Hygiene,

J. M. Cunningham, M. D.

# STAFF OF SECONDARY OR VERNACULAR CLASSES.

Teacher of Anatomy,

(Sub-Asst. Surgeon, Jugobhundo Bose, M. D.

Materia Sub-Asst. Teacher of Medica.

Doss Kur. Surgeon, Tumiz Sub-Asst.

· Teacher of Medicine, Teacher of Surgery,

Sub-Asst. Surgeon, Ram Narain Doss.

# SUCCESSION LISTS.

Principals.

Secretaries.

Surgeon, Doorga

1835 M. J. Bramley,

1837 David Hare.

1841 F. J. Mouat, M. D. 1856 J. McRae, M. D.

1856 T. W. Wilson, M. D. 1854 E. Goodeve, M. B.

1857W.C.B. Eatwell, M.D. 1855 F.N Macnamara, M.D.

1860 S. B. Partridge, F.R.C.S. (officiating.)

1861 N. Chevers, M. D.

1865 C. R. Francis, M. B. (offg.)

1866 J. Ewart, M. D., (offg.)

# Sanscrit College, Calcutta.

AFFILIATED, 1860,

This Institution is supported by Government, and is under the control of the Director of Public Instruction, Lower Bengal. It was founded in 1824, for the encouragement of the study of the Sanscrit language and literature, and at first Sanscrit was studied exclusively.

The College is open to all respectable Hindus, without any distinction of caste. The Schooling fee is three Rupees per month. The upper students read the University Course. There are twenty senior Scholarships, varying from ten to twenty Rupees per month, and ten Junior Scholarships of eight Rupees each.

All the students, with the exception of the last class, learn Sanscrit and English.

Avaluable Sanscrit Library of Manuscripts and printed works is attached to the College, and a Government grant of 600 Rupees per annum is applied to the purchase of standard English and Sanscrit works.

#### INSTRUCTIVE STAFF.

#### English.

Principal, ..... Babu Prasana Kumar Sarvadhicari.
Head Master, ..., Tarinicharn Chatterjya.
Second ditto, ..., Dinanath Mookerjee, B. A.
Lecturer, ....., Dwarkanath Bhuttacharjee, M.A.
,, ...., Shyama Charan Ganguli, B. A.
And three other English Masters.

## SANSCRIT.

Professor of Philosophy, Joynarayan Tarkapanchanana. Ditto of Law, ............ Bharatchandra Siromani. Ditto of Rhetoric, ...... Mohes Chundra Nyayaratna. Ditto of Literature,...... Dwarkanath Vidyabhushana. Ditto of Grammar, ...... Taranath Tarkabachuspati. And eight other Grammar Pundits.

# Hooghly College. Affiliated, 1857.

This Institution was founded in 1836, and is mainly supported from funds bequeathed by Mohammed Moshim, a wealthy Mahommedan gentleman, who, dying without heirs in the year 1806, left his large property, yielding an annual income of 45,000 Rupees, to Mahomedan Trustees "for the service of God." Owing to the misappropriation of the Funds, Government assumed the office of Trusteeship. The right of assumption was opposed by the original Trustees, but upheld both by the Courts in India and by the Privy Council in England. The period of litigation extended over many years, during which the annual income accumulated, forming a surplus of Rs. 861,100. This fund was devoted to the foundation and endowment of the Hooghly College, and was further increased by a portion of the original Zemindari that became available on the death of one of the Mootawallees of the Hooghly Imambarah, an Institution which also derives its support from Mahomed Moshim's Legacy. Another source of increase to the College endowment has been the accumulation of unexpected income, so that at present it yields not less than Rs. 51,000 per annum.

The College consists of three Departments, an English, an Arabic, and a Law Department, and is under the control of the Director of Public Instruction, Lower Bengal. The English Department is open to all students who have passed the University Entrance Examination, the fees being one rupee per mensem for Mahomedans, and Rs. 4 for all others. In the Law Department, the fee is -Rs. 2 per mensem.

In 1846 a sum of Rr. 5,000 was given by Kanee Kutti-Scholarships.

Scholarships.

for the foundation of a Senior

Scholarship in the Hooghly College, to be competed for by the students of this Institution alone. Owing to some misapprehension, the Scholarship remained unawarded for some years, during which the principal was considerably increased by the accumulation of interest, so that it now yields an income of about Rs. 320 per annum; this being more than sufficient to support the existing Scholarship of Rs. 16 per mensem, it has been determined to open another, equal in value, as soon as the yearly savings afford an adequate fund,

Two Junior Scholarships of 8 rupees per mensem are Zemindary Scholarship. attached to the Collegiate and

Branch Schools, preference being given to students of the latter. These Scholarships

were founded in 1843, and are supported by the surplus of the liberal contributions made by wealthy Zemindars\*

\* D. C. Smyth, Esq.

Maharaj Dhiraj Matab
Chunder Bahadoor.

Baboo DwarkaNathTagoro.
" Cally Nath Moonshee.
" Pran Chunder Roy.

", SreeNarayanChowdry. ", RamNarainMookerjee. of the district for the purpose of building the Branch School.

Besides these, there are several Government Scholarships belonging to the Mudressa or Arabic Department.

### INSTRUCTIVE STAFF.

#### College.

S. Lobb, M. A., ...... Offg. Princip C. W. V. Bradford, M. A.,.... Professor.

Baboo Eshan Chunder Banerjee, Professor.

Baboo Troylokho Nath Mitter,

M. A. and B. L., ..... Law Lecturer.

Baboo Gopal Chunder Gupto,... Asst. Professor of San

scrit and Bengali.

Gobind Chunder Seromonee, ... Head Pundit.

Arabic Department.

Moulvee Obeydoolah, .. ...... Professor of Arabic.

Vacant, ..... Head Moulvec.

Moulvee Mohomed Mussaqim, 2nd Moulvee.

Two Arabic Teachers (Moulvees).

# Dacca College.

AFFILIATED, 1857.

The College is supported by Government, and is under the control of the Director of Public Instruction, Lower Bengal.

It was originally opened as a School, by the General Committee of Public Instruction, in the year 1835. In 1841, it was converted into a College, when a Principal was appointed, and an increase made to the staff of teachers. The College building was erected, partly by public subscription, in the same year, at a cost of Co.'s Rs. 36,679.

Any person, who has passed the University Entrance Examination, may be admitted. Students pay a monthly fee of Rupees 3-8.

A silver Medal, called the Donnally prize, is awarded annually, of the value of the interest on Rs. 1,000, subscribed by the native assistants of the late Abkarree Commissioner's office, in memory of the late Mr. A. F. Donnally.

#### INSTRUCTIVE STAFF.

W. Brennand, Principal.

G. Bellett, M. A., Professor.

C. Martin, B. A., Professor.

Shomanath Mookerjee, Assistant Professor.

Opendronath Mitter, M. A. & B. L., Law Lecturer.

# Rishnaghur College.

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AFFILIATED, 1857.

This College was founded by Government, in 1845, and is under the control of the Director of Public Instruction, Lower Bengal.

Any person, who has passed the University Entrance Examination, may be admitted. Students pay a monthly fee of Rupees 3-8.

The College building is a noble edifice, standing upon 3 beegahs of land, and surrounded by an enclosed compound of upwards of 100 more. It was erected at a cost of Rs. 66,876; Rs. 17,000 of which was collected by private subscription. In consideration of the liberality thus manifested in the district, a donor of Rs. 1,000 is allowed to place a boy, free of expense, at the College in perpetuity, and another, for every Rs. 500 additional he may have subscribed. Part of the ground occupied was purchased by Government; for the remainder, the College is indebted to the munificence of the Maharajah of Nuddea and the Rani Surnomye of Cossimbazar.

#### INSTRUCTIVE STAFF.

Principal,—Alfred Smith, M. A.

Professor,-W. Masters.

Professor,—J. C. Nesfield, M. A.

Head Master,—Baboo Omesh Chunder Dutt.

Nine native teachers and two Pundits.

Lecturer in Law, Prosunno Coomar Bose, M. A. and B. L.

### PRINCIPALS.

1845 Captain D. L. Richardson.

1846 Marcus Gustavus Rochfort.

1855 Edward Lodge, B. A.

1857 James Graves, M. A. (officiating).

1857 Leonidas Clint, B. A.

1858 Alfred Smith, M. A.

# Berhampore College.

AFFILIATED, 1857.

This College, founded in 1853, is supported by Government, and is under the control of the Director of Public Instruction in Bengal. A building is in course of erection, the foundation stone of which was laid by the Hon'ble Cecil Beadon, the Lieutenant-Governor, on Wednesday the 29th July, 1863.

The College is open to all classes of the community. Students in the General Department pay a monthly fee of Rs. 4, and in the Law Department of Rs. 2.

Any Student, who has passed the University Entrance Examination or who passes an examination at the College of the same standard, is admissible. Annual prizes to the amount of Rs. 150 are given by Government, and the Native community usually contribute from three to four hundred rupees more.

#### INSTRUCTIVE STAFF.

Principal, Robert Hand.

Professor, D Carnduff.

J W. McClaren Smith.

Head Master, Rev. Lal Behari Dé.

Lecturer in Law, Baboo Gooroo Doss Banerjee, M. A. and B. L.

Assr. Proft. of Sanscrit and Bengali, Ram Guti Shurma.

Eleven Assistant English Teachers and three Pundits.

# Patna College.

AFFILIATED, 1862.

This College is supported by Government, and is under the control of the Director of Public Instruction, Lower Bengal.

It was opened as a Collegiate School in 1862, and raised to a College in 1864. Instruction is given up to the standard of the Examination B. A. of the University of Calcutta, in Science, History, English, Arabic, Persian, Urdu, Sanscrit, Hindi, and Bengali.

A Law Department was added in May, 1864, and a Lecturer was appointed.

#### INSTRUCTIVE STAFF.

# General Department.

J. W. McCrindle, ...... Principal.

J. K. Rogers,.... Professor.

A. L. V. Ewbank, B. A., Professor.

J. Behrendt, ..... Head Master.

Rs. 5; those who have Rs. 70, pay Rs. 3; and those who have only Rs. 30, pay one Rupee: all incomes under Rs. 30 are charged 8 annas per month. An Entrance fee of 2 Rupees is paid by all.

# Queen's College, Benares.

## AFFILIATED, 1860.

The Benares Sanscrit College was founded by Government in 1791, for the cultivation of the language, literature, and (as inseparably connected with these) the religion of the Hindus. In 1830, an English Institution was established, distinct from the Sanscrit College at first, but incorporated with it in 1853.

### MONTHLY AMOUNT OF SCHOLARSHIPS.

English Scholarships,Rs.	365	0	0
Sanscrit ditto,	113	0	0
Anglo Sanscrit ditto,	185	0	0

Total Rupees, 663 0 0

### INSTRUCTIVE STAFF.

# English Department.

Ralph T. H. Griffith, M. A., Principal.

E. E. Rogers, M. A., Professor of Mathematics.

D. Tresham, Lecturer in Chemistry (temporary).

Kali Nath Mozoomdar, ditto Physiology (temporary).

E. H. H. Goulding, Head Master.

E. R. Watts Supernumerary Master.

A. S. Philips, B. A., Assistant ditto.

C. S. Platts, Assistant to Principal.

Sixteen Native Masters.

# Sanscrit Department.

H Kern, Ph. D., Anglo-Sanscrit Professor.

Pramada Doss Mittra, Assistant ditto.

Thirteen pundits.

Two English Teachers.

FORMER SUPERINTENDENTS AND PRINCIPALS.

Captain Fell.

John Muir, C. S.

Major Thoresby.

Rev. A. W. Wallis, M. A.

James R. Ballantyne, LL. D.

# Bareilly College.

AFFILIATED 1862.

This College is supported by Government, and is under the control of the Director of Public Instruction, North Western Provinces. It was opened as a school in 1836, and constituted a College in 1852.

The average number of pupils attending the College in 1864 was 329.

The College is open to all classes, on payment of an Entrance and monthly tuition fee; the latter varies from eight annas to five Rupees, according to the income of the parents or guardians of the boys. Seven senior and seventeen junior Scholarships were gained by pupils in the Departmental and University Examinations of 1863.

The Boarding house for district students, under the charge of Pundit Kedar Nath, accommodates 60 lads.

A new large and handsome building has been erected, with the view of furnishing a comfortable home and

careful superintendence for the sons of native gentlemen studying at the College.

COLLEGE ESTABLISHMENT.

- H. Templeton,—Principal.
- E. Baron, M. A.—Mathematical Professor.
- J. Graves,-Head Master.

Sixteen junior Masters and teachers.



# Saugor School.

(FOUNDED, 1836.)

AFFILIATED, 1860.

This Institution is supported by Government, and is under the control of the Director of Public Instruction, Central Provinces.

Instruction in languages is given in English, Urdu and Hindi,—the first of which is compulsory on all students.

## SCHOLARSHIPS.

Nine Government scholarships, of the annual aggregate value of Rs. 360.

## FEES.

The fees are regulated by the income of the parents; and rauge from 4 annas a month upwards for each student.

#### INSTRUCTIVE STAFF.

Head Master,..... J. Kibble.

Second Master, ..... W. H. Bachman.

Assistant Master, ...... J. H. Firth. Head Pundit, ..... Beharilal.

Head Moulvee, ...... Khalilullah.

And seven junior English and Vernacular Masters.

# Ajmere Collegiate School.

# AFFILIATED, 1861.

This Institution, after having been closed for many years, was re-established in the early part of 1851, under the management of the late Dr. Buch, who was subsequently appointed to the Principalship of the College at Bareilly. In 1861 it was converted into an Anglo-Vernacular School.

#### FEES.

Students are admitted on the payment of an Entrance fee, equivalent to the tuition fee at which their parents' income may be rated.

#### SCHOLARSHIPS.

The endowment is the "Thomason Scholarship" of Rs. 8 per month for the most proficient scholar in Mathematics. An annual donation of Rs. 500 from His Highness the Maharaja of Jeypore is distributed into 12 junior scholarships, which are conferred on those whose merits are not quite such as to entitle them to the higher Government stipends.

Connected with the school are an Observatory, which is used for giving instruction in practical Astronomy, and a Lithographic Press. A well supplied library, which owes many of its most valuable works to the munificent bequest of the late lamented Col. Dixon, Commissioner of Ajmere, is accessible alike to residents of the station and pupils of the school.

#### INSTRUCTIVE STAFF.

- J. F. Goulding. Superintendent.
- J. Statham, Head Master.

Pundit Amoluk Chund, teacher of Mathematics and 2nd English Master.

Vacant, 1st Persian Teacher.

Pundit Sheo Narain, 1st Hindi Teacher.

Ten assistant Teachers.

# Queen's College, Colombo, Ceylon.

AFFILIATED, 1859.

This Institution was founded, under the name of the Colombo Academy, in the year 1836, during the government of the Rt. Hon'ble Sir Robert Wilmot Horton, and is supported by the Government of Ceylon, who pay all the salaries and other necessary expenses; these are in part repaid by the fees received from the students, which vary from £1-15 annually, in the lowest classes, to £7-10 in the highest.

The only endowment is the "Turnour Prize," which was instituted in 1843, from a fund raised for the purpose of testifying respect for the memory of the late Hon'ble George Turnour, at which time the following resolution was passed by the subscribers.

"That the interest of the money raised (£190) be devoted to give one prize yearly in the Colombo Academy to the most advanced and best conducted scholars; that the sum so awarded be called 'The Turnour Prize,' and be placed under such regulations as the Central School Commission may establish."

In the year 1861, a Resolution was passed by the Central School Commission of Ceylon, establishing seven Queen's Scholarships in connexion with Queen's College; three being junior Scholarships, of the value of £12 per

annum, tenable for three years by students in the Upper School of the Academy, to be awarded to the best answerers at the annual competitive Examinations open to all Candidates; and four being senior Scholarships, of the value of £20 per annum, tenable for four years by students in Queen's College, Colombo, one to be awarded each year to that student who, at the University Entrance Examination, shall stand first of the Ceylon candidates in the order of merit in the first division.

The Colombo Academy was, for many years, the only Institution in the Island, with the exception of one supported by the American Board of Missions at Batticotta near Jaffna, which professed to give a liberal education to its alumni. Several of its former students have filled and are now filling high offices on the Bench of the Supreme Court, in the Executive and Legislative Councils of Ceylon, and in other important positions.

LIST OF PRINCIPALS.

1836 Rev. Joseph Marsh.

1838 Rev. John Fearby Haslam, A. M., Cambridge.

1842 Rev. Barcroft Boake, A. B., T. C. D.

INSTRUCTIVE STAFF.

Principal.

Rev. Barcroft Boake, A. B., T. C. D.

Professors.

John Henry Marsh, Edinburgh.

G. S. Steward, M. A. Ch. Ch. Ox.

Assistants.

Edwin Ludovici. Adrian de Zoysa.

Daniel Gogerly. Marcellus Perera.

John Perera. Egbert Ludikens.

Jansz.Gabriel Fernando.

- Fritsz.

Vincent Siding.

# Bishop's College.

(FOUNDED, 1820.)

AFFILIATED, 1860.

This College was designed by Bishop Middleton, primarily as an aid to evangelistic work; which its members were to labour to promote as well by the education of native and other youths, to be employed as missionaries, catechists or school-masters, as by the composition of books and tracts. In 1830, the statutes were modified so as to allow of the admission of lay or general students, not intended for clerical or educational work.

### Foundation.

· One fellowship, founded by the late Rev. John Natt.

Twenty-one Scholarships, founded by various societies and individuals.

The holders of scholarships have rooms, boarding and tuition, free of charge.

TRUSTEES.

The Incorporated Society for the Propagation of the Gospel in Foreign parts.

VISITOR.

THE BISHOP OF CALCUTTA.

MEMBERS.

T. Skelton, M. A. Principal.

Krishna Mohan Banerjea,\* Professor.

Member of the Board of Examiners for the Civil Service.

#### PRINCIPALS.

1821 William Hodge Mill.

1841 George Udny Withers.

1849 William Kay.

# Dobcton College.

(FOUNDED, 1855.)
AFFILIATED, 1857.

This College is attached to the Parental Academic Institution, a boarding and day-school, which was established on the 1st March, 1823, by a body of Christian parents who were anxious to secure for their children the benefits of a liberal education.—In 1855 a legacy of two lakhs and 30,000 Rupees, was bequeathed to the Institution, by the late Captain John Doveton.

# SCHOLARSHIPS AND PRIZES.

Two scholarships, varying in value from Rs. 15 to 25 per month, are annually given to the two students, who pass highest in the First division in the Entrance Examination or First Examination in Arts. The number which may be held simultaneously is restricted to eight. If held along with a Government Scholarship, its amount is deducted from the above sums. Each scholarship carries with it the privilege of free education.

A gold medal, of the value of Rs. 120, is annually given to the best scholar in one of the advanced classes.

### VISITOR.

The Lord Bishop of Calcutta.

Chairman of Committee of Management.—II. Andrews.

Secretary.—G. Livesay.

#### INSTRUCTIVE STAFF.

Theology, Philosophy and Logic, J. Sime, B. A., Principal. English Literature, History and Physiology, H. Roberts. Mathematics and Natural Philosophy, A. Pirie.

### LIST OF PRINCIPALS.

1850 Rev. A. Morgan.

1855 George Smith.

1856 J. W. McCrindle, M. A.

1866 J. Sime, B. A.

# St. Paul's School.

AFFILIATED, 1857.

This Institution was founded in 1845, and is under the control of a Committee, of which the Bishop of Calcutta is President, and the Venerable the Archdencon, Vice-President.

- FOUNDATION, SCHOLARSHIPS AND PRIZES.
- 1. Foundation.—One boarder and four day-boys, are on the foundation; the first receives his board and education free, and the other four, their education. The nomination to these is with the Bi-hop of Calcutta.
- 2. Bishop Wilson's Scholarships.—Two scholarships of 20 Rupees a month have been endowed in memory of the late Bishop Wilson, each to be held for two years. According to the terms of the endowment, these scholarships are competed for by the whole of the Christian boys in the school, whether boarders or day-boys; one being given every year. They were instituted in the hope that the higher boys may be induced to extend the period of their studies, and become 'fitted to graduate in the University.

3. Prizes.—Two silver medals, one for proficiency, the other for general good conduct, are awarded at the annual Christmas Examination. Prizes in books are also given to the most proficient in each class.

# Course of Study.

The subjects of Examination for Entrance into the University of Calcutta form the basis of instruction in the first class.

The study of the remaining five classes is arranged in a gradual proportion down to the first elements of learning. The whole course assigned for each class is so adjusted as to occupy one year.

In addition to the above school course, there is in operation a course of training for the B. A. Degree in the University of Calcutta. This is done in conformity with the conditions of affiliation to the University. The subjects appointed to be read are divided in such a way as to embrace a distinct course for each year.

# LIST OF RECTORS.

1847 Rev. J. Kyd, M. A.

1849 Rev. S. Slater.

1852 Rev. J. Richards, M. A.

1855 Rev. G. Pridham, B. C. L.

1859 Rev. W. Ayerst, M. A.

1862 Rev. F. C. Cardew, M. A.

1864 Rev. J. C. Nesfield, M. A.

# PATRON.

THE RIGHT HON'BLE THE GOVERNOR-GENERAL.

### Visitors.

The Right Rev. the Lord Bishop of Calcutta.

The Venerable the Archdeacon of Calcutta.

The Rev. the Principal of the Bishop's College.

INSTRUCTIVE STAFF.

Rector, Rev. G. M. Wilson, M. A.

Divinity and Classics, Rev. G. M. Wilson, M. A.

History and English Literature, J. Gilchrist, Cheltenham Training College.

Mathematics, G. H. Simmons, Cheltenham Training College.

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# Free Church Austitution, Calcutta.

AFFILIATED, 1857.

Originally established by Dr. Duff in August, 1830, for the education of native youth, under the name of the General Assembly's Institution, and since 1843 designated the Free Church Institution, being supported by the Free Church of Scotland.

The Institution, since 1857, has been in a handsome new edifice, Nimtollah Street, which has been creeted at a cost of upwards of £15,000.

It consists of two departments, a College Department, and a Preparatory and Normal School.

In the College department all the branches of a higher education in English Literature, Science, and Philosophy, with Bengali and Sanscrit, are taught, in immediate connection with systematic instruction in the doctrines and evidences of Natural and Revealed religion.

For the last 20 years, the average number of pupils has exceeded a thousand; of whom about a hundred and fifty belong to the College department.

#### SCHOLARSIHPS.

- 1. There is an endowment of Rs. 100 per month for small scholarships of 5 or 6 Rupees per month each, which are allotted only to those who pass the University Entrance Examination.
- 2. There are two endowed Theological Scholarships, of Rs. 16 per month each, called "the Duff Scholarships," designed for students who are candidates for the Christian ministry.
- 3. There is also an endowed "Hawkins Scholarship," of Rs. 8 per month, founded by the liberality of the gentleman whose name it bears.
- 4. A few Senior and Junior Government Scholarships have been granted to those who most successfully pass the University Examinations.

# ANNUAL PRIZES.

1. Endowed prizes: -The Hawkins gold medal of Rs. 100 to the most successful student in the Institution.

The Macdonald Prize.

The Ewart Memorial Prize of Rs. 50.

The Kelloe Prize of 40 or 50 Rupees, founded by the late Mr. Buchan of Kelloe.

These are usually allotted for the best essays on prescribed subjects.

2. Besides these, prizes for General scholarship and regular attendance are awarded in all the classes; with several more for especial exercises or essays.

## INSTRUCTIVE STAFF.

Rev. W. C. Fyfe, Superintendent.

" K. S. Macdonald, M. A.

" Murray Mitchell, D. D.

# Mr. Martin Mowat, M. A.

- . James Bruce.
- ., Kalicharn Banerjee, M. A.
- " Umesh Chandra Chatterjea.
- " Banimadub Pal, B. A.
- " Krishna Chandra Das, B. A.
- " Dhone Kristo Ghose, B. A.
- " Brajanath Sarma, with upwards of 20 native Teachers and Pundits in the School Department.

# La Martiniere College.

AFFILIATED, 1857.

This Institution was founded by Claude Martin, a native of Lyons in France and a Major-General in the service of His Majesty, the King of Oude. By his will he bequeathed a sum of three hundred and fifty thousand Sicca Rupees, afterwards considerably augmented, to be devoted to the establishment of a school for the Christian inhabitants of Calcutta, under the direction of the Government of the Supreme Court.

## GOVERNORS.

The Governor-General, the Members of Council, the Judges of the Supreme Court, the Bishop of Calcutta, and the Advocate-General for the time being, together with four additional Governors to be elected by them annually. The four Governors so elected, with one of the ex-officio Governors, form a board of Acting Governors, to whom the general control of the Institution is entrusted.

## FOUNDATION BOYS

The Governors from time to time select from among the Christian population of Calcutta, a sufficient number of poor boys, of an age of not less than 4, nor more than 10 years, so that there may always be at the least 75 boys on the establishment of the school. These boys are entirely educated and supported out of the funds of the school. Boarders and day-scholars may be admitted at the discretion of the Governors, provided that they are not a burden on the charity.

The Institution was opened on the 1st March, 1836. It is divided into two departments, College and School. The Educational Staff consists of a Head Master, and five assistant Masters, together with Surveying, Drawing and Music Masters and a Pundit.

## PRIZES AND SCHOLARSHIPS.

A gold medal is annually awarded on the 13th of September, the anniversary of the death of the Founder, to the head boy of the College Department, and prizes of books are given in all the classes.

Two Scholarships are also then awarded, tenable for two years, one in the College Department, of Rs. 20 a month, one in the 1st class of the school, of Rs. 16.

## ACTING GOVERNORS.

The Hon'ble W. S. Seton-Karr.

The Hon'ble J. B. Phear.

T. Bruce Lane, Esq. C. S.

The Ven. Archdeacon Pratt.

The Rev. W. C. Bromehead.

Secretary and Medical Officer, F. N Macnamara, M. D.

#### PRINCIPALS.

1844 A. M. W. Christopher, B. A.

1848 H. Woodrow, M. A.

1854 W. S. Atkinson, M. A.

1860 L. Ewbank, M. A.

1862 C. W. Hatten, B. A.

#### Head Master.

J. A. Aldis, M. A.

#### Assistant Masters.

G. Davis. H. Gick. J. Hodges. E. R. Forbes. Drawing Master, C. Augier. Surveying Master, T. A. Jones. Music Master, G. B. Lissant. Pundit, Ramcoomar Chatterjea.

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# London Missionary Society's Knstitution, Bhowanipore.

## AFFILIATED, 1857.

This Institution was founded by the London Missionary Society in the year 1838. In 1854 the large and handsome building now used, consisting of a Library, a Hall, and sixteen class-rooms, was first opened.

The Institution is divided into three departments, viz. a College department for undergraduates of the University, a School department, and a Theological class for training Christian natives for Missionary work.

The course of study comprehends English, Sanscrit and Bengali Literature, Mental and Moral Philosophy,

Mathematics, History and Geography, together with the Sacred Scriptures and Christian Evidences.

The number of students and scholars amounts to more than 500. A branch school at Behala, four miles to the south-west of Calcutta, contains 150 boys.

#### INSTRUCTIVE STAFF.

Rev. J. P. Ashton, M. A. Principal.

Rev. J. Naylor, B. A.

Rev. T. E. Slater.

Baboo Bhogoban Chunder Chatterjea, B. A.

Baboo Mathoora Nath Bose, B. A.

Baboo Parbutty Churn Banerjea, Evangelist.

Fourteen native teachers and three pundits.

# St. Xabier's College.

AFFILIATED, 1862.

This Institution was established under the direction of the Society of Jesus, in January, 1860, in the large building formerly appropriated by the late Dr. Carew for St. John's College. It is mainly intended for the liberal education of Catholic youth, but is open alike to pupils of other religious persuasions, on the same principle of non-interference as in the old St. Xavier's College which broke up in 1846.

Besides the paying boarders and day-pupils, some free scholars are admitted, especially for the higher studies, as hitherto no scholarships have been founded.

The course of study is similar to that followed in the European Colleges of the same Society, but adapted to the wants of this country. One or two years' training in the elementary division is generally required, before a student can enter the first year's or lowest class. The successive higher classes are organized in accordance with the University curriculum, and with a plan of gradual development extending over four years.

Medals and prizes in books are awarded to the best scholars, at the Christmas Examination.

#### INSTRUCTIVE STAFF.

Very Rev. H. Depelchin, Rector.

Rev. L. Veys, Prefect of Studies.

Rev. Charles de Pennaranda, Prefect of Discipline, Professor and Masters.

Rev. J. Carbonelle, Ph. D.

Rev. F. Carette.

Rev. J. Carvan.

Rev. J. Devos.

Rev. H. Everard.

Rev. J. Hickerding.

Rev. H. Shea.

Rev. A. Stockman.

Rev. H. Vanderstuyft.

Rev. A. Brisack.

Rev. J. Henry.

Rev. B. Larcher.

Rev. E. Hent.

Mr. P. Cauty.

Mr. E. Coutto.

Mr. J. Hyland.

Moonsheee, Wahed Khan.

Pundit, Gopal Chuuder Ghose.

Drawing Master, Mr. Bennett.

Music Masters, ... { Mr. Desterbecq. Rev. B. Larcher.}

Sub-prefects, .... { F. Coremans. A. Eeckman. A. Koppes. D. Vandamme.}

# Scrampore College.

AFFILIATED, 1857.

This Institution was founded in 1818, under the patronage of the Marquis of Hastings, then Governor-General of India, by the Rev. Dr. Carey, Dr. Marshman and W. Ward, who, together with Col. Krefting, the Danish Governor of Sciampore, and J. C. Marshman, Esq., formed the first Council.

In 1821, it received a munificent donation from the King of Denmark, consisting of certain premises to the northwest of the College, and this act of liberality was followed in 1828 by the grant of a Royal charter giving perpetuity to the Institution and its endowments. At the cession of Serampore to the East India Company, this charter was confirmed, at the especial request of the Danish Sovereign.

The ground on which the College stands was purchased chiefly by subscription; the entire expense of the buildings, amounting to about £15,000, was met out of the private funds of the Serampore Missionaries, who were the first promoters of the undertaking. After the death of Dr. Marshman, the funds for carrying on the operations of the College were provided partly by the endowments, but chiefly by the liberality of J. C. Marsh-

man, Esq., the only surviving member of the original Council. On his departure from India in 1856, the College was placed under the general direction of the Baptist Missionary Society, which has since contributed towards its support and become identified with its operations.

It is conducted by two European Professors and a European Superintendent of the lower school, assisted by twelve native teachers. The number of youths in the College department is about thirty, in the school five hundred.

The interest of funds raised by Mr. Ward in Europe and America supports wholly, or in part, several European youths, connected with the Mission or wishing to become so, and also a boarding School for the children of native preachers. Scholarships to the amount of about 40 Rs. monthly are distributed amongst the most deserving of the native students in the College classes.

An education fee, exacted from the European students, contributes to the preservation and improvement of the Library.

The course of study is intended to impart a liberal education, and special attention is paid to the principles of Christianity.

The present members of the Council are J. C. Marshman, Esq., M. Townsend, Esq., M. Wylie, Esq., Revs. J. Sale and J. Trafford.

The education is conducted by the Rev. J. Trafford, A. M., Principal, (on leave) Rev. J. H. Anderson, offg. Principal, Rev. T. Martin, Tutor, Baboo Biprodoss Chatterjea, B. A. Mathematical Teacher, and E. Dakin, Esq., Head Master of the school.

# St. John's College, Agra.

# AFFILIATED, 1861.

This College was established in 1850, in connection with the mission of the Church Missionary Society at Agra, chiefly at the instance of an influential body of Civilians and Military Officers then forming the Committee of the Local Church Missionary Association, who wished to have an Educational Institution of a high order connected with the Mission.

The large and handsome gothic building, in which the classes are now held, erected from the design of Major Kitto, was completed in 1853; and at the outbreak of the mutiny in 1857, the number of students on the rolls had reached 330, under the able superintendence of the Rev. T. Valpy French, M. A. the first Principal.

# Scholarships.

- 1. The College is endowed with two scholarships founded in memory of the late Mr. Thomason and bearing his name, value Rs. 10 per month each, and tenable for one year. These scholarships are assigned at the annual Christmas examination to the two most proficient students in English literature.
- 2. There are also two endowed theological scholarships, founded in 1861, value Rs. 5 per month and tenable for one year, assigned to the two students who shew themselves best acquainted with the doctrines and principles of the Christian religion.
- 3. Other scholarships, to the value of nearly Rs. 40 per month, are given from the general funds of the

College for proficiency in English, Mathematics, Hindee, and Persian.

4. A scholarship, of the value of Rs. 5 per month at least, is awarded to each student who has passed the Calcutta University Entrance Examination.

#### FEES.

Every student is required to pay entrance and schooling fees, ranging from 4 annas to Rs 3 per month, according to the income of his parents or guardian.

# PRINCIPALS.

1850 Rev. T. Valpy French, M. A.

1858 Rev. H. W. Shackell, M. A.

1861 Rev. J. Barton, M. A.

1863 Rev. C. Ellard Vines, B. A.

INSTRUCTIVE STAFF.

Principal, Rev. C. Ellard Vines, B. A. The Rev. H. W. Shackell, M. A., ex-principal, although he has declined for the future the responsible charge of the College, still continues to assist in giving instruction in various branches of study.

Head Master, R. J. Bell, Esq.

ENGLISH TEACHERS,

Mr. Williams.

Baboo Harry Churn Chuckerbutty.

Baboo Hira Lal.

Baboo Muttra Das, and others,

URDU, PERSIAN AND ARABIC TEACHERS.

Moonshee Kamer Uldin.

, Nur Allah, and others.

# Joy Narain's College, Benares.

# AFFILIATED, 1862.

A free school was founded in the year 1818 by Rajah Joy Narain Ghosal, Bahadoor, in gratitude for his recovery from a protracted illness.

He endowed it with a monthly sum of Rupees 200, increased by Government to Rupees 452, and appointed the Committee of the Calcutta Church Missionary Association for the time being trustees, with directions that they should "appoint such members as shall be able to satisfy the enquiries of the learned of this ancient city on subjects of Science, History and Religion."

In 1853, the spacious school room provided by Joy Narain having been found insufficient for the number of students, the present building was erected; at the same time the school was raised to a College, and named after the founder.

# Scholarships.

Thomason, Rs.	102
Vankatacharya's,	260
Munshi Situl Sing's,	200
Rajah Sutt Churn Ghosal's,	160

#### INSTRUCTIVE STAFF.

Rev. H. D. Hubbard, M. A	Principal.
Rev. James Erhardt,	Vice-Principal.
Rev. W. Hooper, M. A.,	Sanscrit Lecturer.
Baboo Timothy Luther,	Head Master.

Nine English Teachers and eighteen Teachers for the Classical and Vernacular Languages of India.

# St. Thomas's College, Colombo.

# AFFILIATED, 1864.

This Institution was founded by Bishop Chapman, in 1851, and consists of two parts; the College and Collegiate School.

The College instruction comprehends two courses of study; one adapted to those who desire a general education; the other, to those who intend to devote themselves to the ministry.

The former course consists of Lectures in Divinity Logic, Classics, Mathematics, History, Natural Science, and the study of the English language.

The instruction in the Theological Course is in strict conformity with the principles of the Church of England.

No scholar of the School, who has passed the Entrance Examination of the Calcutta University, is permitted to continue in the School; he must either enter the Callege, or cease his connection with the Institution.

There is also an Orphan Asylum appended to the Institution.

- ,, Classics, &c. Ditto, (pro tem.)
- " Singhalese, . Rev. C. Alwis.
- " Tamil, …
- " Music, ... Mr. H. C. Hancock.

COLLEGIATE SCHOOL.

Head Master, ... (Vacant).

Assistant Masters, ... Messrs. H. C. Hancock, Tocke, Rae, F. H. Perera, Elders, and C. Peréra.

Supdt. of Orphan Asylum, Mr. S. Dias.

# General Assembly's Institution, Calcutta.

This Institution was founded in 1830. It is supported by the Church of Scotland, and is under the control of the General Assembly's Foreign Mission Committee.

#### INSTRUCTIVE STAFF.

Rev. James Ogilvie, D. D., Principal. James Wilson, Esq.

Baboo Nilambora Mookerjee, M. A., B. L.

•,, Mohendro Nauth Mitter, M Pundit Bireshwar Bidyaratna.

# Thomason Civil Engineering College, Boorkee.

The Thomason College was founded in 1847, under the auspices of the Hon'ble James Thomason, Lieutenant-Governor, N. W. Provinces. It is designed to supply the Public Works and Survey Departments with Assistant Engineers, Overseers and Sub-Surveyors or Sub-Overseers.

The College is divided into Senior, First, Second and Third departments. The Senior consists of officers of the Army, the First of Civilians (English and Native); both of these departments pursuing the same

course of study. The students remain for three terms, and on the successful completion of their studies receive certificates and appointments as Assistant Engineers or Surveyors in the Government service. Senior department students pay 10 rupees a month, instruction is gratuitous to the rest; and in the native class are 6 Scholarships of 50 Rs. a month, open to natives of the Upper Provinces only. Candidates for the 1st Department must be 18 years of age, and must have passed the First Examination in Arts of the Calcutta University.

The second department consists chiefly of English soldiers, but there is also a Civilian class (English and Native) attached. The students remain one term, and are passed out as Overseers in the Public Works Department. Instruction is gratuitous, and there are six Scholarships of 30 Rs. monthly in the English Civil class, and six of 10 Rs. monthly in the native class. The Entrance Examination comprises Arithmetic, Practical Geometry, and Mensuration, with English Dietation and Reading.

The instruction in both the above departments is entirely in English.

The third department is for natives only, (the instruction being in the Vernacular) who remain two terms, and are passed out as Sub-Overseers or Sub-Surveyors of the 1st and 2nd class. In this department, there are ten Scholarships of 10 Rs., and forty of 5 Rs. monthly. The Entrance Examination comprises Arithmetic, Geometry, and Mensuration, with Urdu Dictation and Reading.

The course of study varies in the different depart-

ments, but includes Mathematics, Civil Engineering, Surveying and Drawing for all, besides instruction for the higher departments in Chemistry, Mineralogy and Photography.

The following is the detail of the four principal subjects for the two higher departments.

## Mathematics.

Arithmetic, Algebra, Geometry, Trigonometry, Statics, Dynamics, Hydrostatics and Hydrodynamics, Conic Sections, Differential and Integral Calculus, Spherical Trigonometry.

# Civil Engineering.

Building materials, their nature, uses and strength, principles of general construction, including earthwork, masonry and carpentry. Special constructions, such as Roads, Bridges, Buildings, Irrigation works, and Railways, applied Mechanics, Machinery, Designing, Estimating, Laying out work.

# Surveying.

Use and adjustment of instruments, viz., Chain, Compass, Sextant, Level and Theodolite, taught practically in the field. Execution of Surveys with the Chain and the compass. Theodolite and plane Table. Trigonometrical Surveying, Levelling, Contouring, Practical Astronomy.

# Drawing.

Construction of Scales, making Plans and Sections from actual measurements. Mapping, and a regular course of Engineering. Architectural, Mechanical and Perspective Drawing.

The subjects taught to the two lower departments are of course both fewer and are more restricted.

The preceptive Staff of the College is as follows:-

Major J. G. Medley, R. E., Principal.

Lieutenant J. Browne, R. E., Assistant Principal.

Lieutenant A. Cunningham, R. E. ditto ditto, officiating.

Murray Thomson, Esq., M. D., F. R. S. E., Professor of Experimental Science.

Mr. P. Keay, Head Master.

Sergeant Graham, Assistant ditto.

W. Scotland, Esq. Drawing Master.

Serjeant G. Pearce, Assistant Drawing Master.

Behari Lall, 1st Native Master.

Sheikh Becha, 2nd ditto ditto.

Fusseh Ooddeen, 3rd ditto ditto.

Shumbhoo Dass, Native surveying Master.

Guneshee Lall, Drawing Master.

Futteh Chund, ditto ditto.

# Lahore Mission School.

AFFILIATED, 1864.

This Institution was founded on the 19th December, 1849, soon after the annexation of the Punjab, and is the oldest English school in the Province.

In the College department there are two classes; in the first of which there are eight students, and in the second six, all of whom have passed the Entrance Examination. Of these one is a Musulman, four are Christians, and nine Hindus. The four religions represented in the school are the Hindu, Musulman, Sikh and Christian. The greater part are Hindus. The number of Sikhs is small, owing to the fact that they compose a small part of the community.

The Instructive Staff consists of the Rev. J. Newton, M. A., the Rev. C. D. Forman, M. A., Principal, J. Newton, Jr., M. D., Mr. D. Maitra, Head Master, and fourteen other Teachers.

# Cathedral Mission College, Calcutta. Affiliated, 1865.

This College was established by the Church Missionary Society in 1865, and is especially designed for the education of Native Under-Graduates of the University.

It takes its name from the circumstance of the Missionaries, who take part in the work of instruction within its walls, being mainly supported by the Cathedral Endowment Fund, originally raised by Bishop Wilson for the support of a body of Missionary Canons in connection with his new Cathedral, with the view of thereby exercising a directly Christian influence upon the upper classes of native society. When, however, he failed to obtain a charter for the foundation of a Cathedral Chapter, he resolved to carry out the object he had at heart, by employing the agency of the two Missionary Societies already labouring in Calcutta in connection with the Church of England, and accordingly a considerable portion of the interest of the Fund was placed at the disposal of the Church Missionary Society for this purpose.

The course of study is that prescribed by the University for its Examinations for degrees in Arts, with the addition of the Bible and the Evidences of Christianity.

#### SCHOLARSHIPS AND EXHIBITIONS.

- 1. There are five endowed Scholarships, varying in value from Rs. 5 to Rs. 10 each, founded by the liberality of the friends of Native Education in England, and designed to encourage more especially the study of the Christian Revelation and Evidences. The elections to these Scholarships take place annually.
- 2. Several other Scholarships, in value from Rs. 5 to Rs. 10 each, are allotted from the general fund of the College to those students who acquit themselves best in the several College Examinations.
- 3. Ten Exhibitions of the monthly value of Rs. 5 each, and tenable for one year, are given annually to the ten best students from the various Schools maintained by the Church Missionary Society in Lower Bengal, who have passed the Entrance Examination, and wish to continue their studies in the College.

#### INSTRUCTIVE STAFF.

Rev. J. Barton, M. A., Principal and Professor of English Literature.

Rev. E. C. Stuart, B. A. Professor of Philosophy.

Rev. A. P. Neele, Professor of History.

W. G. Willson, Esq., B. A., Professor of Mathematics.

C. Miller, Esq., Barrister-at-Law, Joint Professor of English Literature.

Baboo Joy Gobindo Shome, M. A. Asst. Professor of Philosophy, Baboo Kanti Chunder Banerjee, Professor of Sanskrit.

# Dehli College.

# AFFILIATED, 1864.

An Oriental College founded in 1792, and supported by voluntary contributions of Mahomedan gentlemen, acquired a large accession of income in 1829 by the munificent gift of 170,000 Rupees of the late Nawab Ilmad-ud-Dowlah, formerly minister at Lucknow. The College was then divided into two departments, an oriental and an English: and in 1841 Mr. F. Boutras was appointed first Principal. In 1855 the Institution. up to that time under the supreme direction of a managing Committee, was placed under the control of the D. P. Instruction for the N. W. P. In 1857, the very valuable oriental Library was plundered and destroyed by the Mutineers, after which in 1858 a new School was founded, which is now, by affiliation to the Calcutta University, the present Dehli College, Students pay a fee of two rupees.

#### INSTUCTIVE STAFF.

Principal,	C. R. Cooke, B. A.
Offg. Professor,	Crampton Doran.
Offg. Arabic Professor,	Moulavi Ziyauddin.
Offg. Head Master,	C. Kirkpatrick.
2nd Master,	
fro fr	2

The College has connected with it, under the management of the Principal, a Zillah School educating 450 boys, and 11 Branch Schools educating 860 boys, besides 6 indigenous Schools educating some hundred boys.

Former Principals.

F. Boutras.

J. Sprenger, M. D.

J. Cargill, B. A.

F. Taylor, M. A.

E. Willmot, B. A.

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# Lahore Gobernment College.

AFFILIATED 1864.

This Institution is supported by Government, and is under the control of the Director of Public Instruction, Punjab. It was opened in 1864.

The College is open to all classes on payment of a monthly tuition fee of Rupees 2.

The sum of Rs. 100 has been annually allotted by Government for Scholarships.

Attached to the College and under the supervision of the Principal are the Lahore Zillah School and five Branch Schools in various parts of the city of Lahore.

The average number of pupils during the year 1865-66, was in the College 12, who have passed the Calcutta University Entrance Examination, in the Zillah School 129, and in the Branch Schools 566.

The Zillah School was opened in March 1860, and since December 1862, fifteen students have matriculated from it in the Calcutta University.

The sum of 125 was given in Scholarships in the School in the year 1865-66. In addition to scholarships free quarters are given to scholars from a distance.

#### INSTRUCTIVE STAFF.

G. W. Leitner, Ph. D. ... Principal.

W. Crank,..... Professor of Mathematics,

Moulavi Alumdar Hosein, Asst. Professor of Arabic, I. C. Beddy, ...... Head Master of the School,

D. W. Thompson, ...... Second ditto ditto.

And 21 other Masters in the Schools.

# Canning College, Lucknow.

AFFILIATED, 1867.

This College, founded by the talooqdars of Oudh in memory of the late Earl Canning, was opened on the 1st of May, 1864. The institution comprises three departments, the College proper, an English School, and an Oriental department, in which only Sanscrit, Persian and Arabic are taught.

Canning College is supported by the talooqdars of Oudh, aided by Government. By a sunud duly executed the talooqdars unanimously endowed the College in perpetuity with a percentage of the revenues of their talooquas. This sum, amounting on an average to twenty-seven thousand rupees per annum, is collected by the officers of Government, as a part of the revenue due to Government, and is deposited in the Government treasury for the use of the College. A Government Grant-in-aid, equal in amount to the talooqdars' subscriptions, is also enjoyed by the College, so that its total income from

endowment, Grant-in-aid, and fees, aggregates s thousand rupees per annum.

The institution is open to all classes, and its obj as declared by the rules, is to impart instruction in English Language and Literature, in Mathematics Science, in the Oriental classical Languages and Vernacular Languages of the province of Oudh. management is vested in a Committee consisting of Commissioner of Lucknow, Director of Public Instr tion in Oudh, the Civil Judge, and representatives the taloogdars.

At the end of 1867 the number of pupils was 50 upwards of 430 of whom belonged to the Engl. School. Monthly fees vary with the income of parel or guardians. In the Oriental department, the range from one anna to four annas, and in the Engli School from eight annas to ten rupees.

## INSTRUCTIVE STAFF.

R. Boycott, ..... Principal.

M. A. White, M. A. ... Head Master.

J. L. Macarthur, ..... Second Master.

Rajcomar Surbhadichar-

ry, B. A. .... Professor of Sanscrit.

Syud Hossain, B. A. ... Professor of Arabic.

Ten English Teachers.

Five Moulvies.

Two Pundits.

# GRADUATES.

## LAW.

# In Alphabetical order.

B. L.

	ь,	L.			
Bandyopádhyáy,	Avináschandra,	•••	1867 1	Presidenc <b>y</b>	College.
,,	Bámácharan,	•••	1866	Ditto	
,,	Bhairavchandra,	•••	1863	Ditto	
37	Gopináth,		1864	Ditto	
,,	Gurudás,	•••	1866	Ditto	
11	Hemchandra,	•••	1866	Ditto	
,,	Paresnáth,		1864	Ditto	
,,	Pramathanáth,	•••	1867	Ditto	
,,	Sattyadayál,		1867	Ditto	
Bardan, Mohinin	nohan,	•••	1866	Ditto	
Basu, Amarnáth,	1	•••	1865	Ditto	
" Amvikácht	aran,	••	1863	Ditto	
" Chandraná	ith,	•••	1867	Ditto	
" Dakhinápr	asád,		1864	Ditto	
,, Devendral	ál,		1861	Ditto	
" Devendran	aráyan,		1859	Ditto	
" Prasannak	umár,	•••	1866	Ditto	
" Rajendrak	umár,		1867	Ditto	
" Rakhálcha	ndra,	•••	1867	Ditto	
" Rameschar	ndra,	•••	1864	Ditto	
" Sasibhush	ın,		1862	Ditto	
Bhatta, Nafarch	andra,	•••	1864	Ditto	
Bisi, Kesavnáth,		•••	1867	Ditto	
Biswás, Rudraķá	nts,	•••	1866	Ditto	
Chakravarti, Giri	íschandra,	•••	1865	Ditto	
,, Isv	rarchandra,	•••	1863	Ditto	
" Syc	ímácharan,		1866	Ditto	
Chattopádhyáy,	Amritalál,	•••	1862	Ditto	
", Ја	dunáth,	•••	1861	Ditto	
"Kr	ishnachandra,	•••	1865	Ditto	
" Pr	atápchandra,	•••	1860	Ditto	
" Si	vchandra,	•••	1867	Ditto	
16					

Chaudhuri, Giríschandra,	••	. 1865	Presidency	College
Dás, Chandrakumár,	•	1000	Ditto	contago
" Párvatícharan,	•••	1867	Ditto	
" Táráprasanna,	•••	1863	Ditto	
Datta, Akhaychandra,	•••	1867	Ditto	
,, Bhavanicharan,	•••	1864	Ditto	
" Kálikádás,	•	1861	Ditto	
" Lálgopál	•••	1865	Ditto	
" Táraknáth,	•••	1861		
De, Jadávchandra,	•••	1860	Ditto	
" Navinchandra,		1862	Ditto	
Gangopádhyáy, Navinchandra,		1861	Ditto	
" Ravichandra,	•••	1864	Ditto	
Ghosh, Anantaram,		1864	Ditto	
" Agharnáth,	•••	1863	Ditto	
,, Devendrachandra,	•••	1867	Ditto	
, Govindachandra,		1867	Ditto	
"Rásvihári,	•••	1867	Ditto	
" Tárinícharan,	•••	1867	Ditto	
Goswámi, Herambalál,	•••	1865	Ditto	
Guha, Piárilál,		1865	Ditto	
Háldár, Syámlál,	•••	1865	Ditto	
Maitra, Rádhágovinda,		1860	Ditto	
Majumdar, Jugatdurlabh,		1866	Ditto	
" Kedárnáth,	•••	1863	Ditto	
Mallik, Atulcharan,	•••	1866	Ditto	
"Balatúm,		1866	Ditto	
" Srikunta,		1864	Ditto	
, Upendrachandra,	•••	1866	Ditto	
Mitra, Benimadhav,	•••	1865	Ditto	
" Dwárskanáth,	•	1867	Ditto	
, Girischandra,		1867	Ditto	
" Mahendralál,		1867	Ditto	
" Mahondranáth,	•••	1867	Ditto	
" Narasmhachandra,	•••	1864	Ditto	
" Purnachandra,	•••	1866	Ditto	
" Rameschandra,	•••	1861	Ditto	
n Tárávilás,	•••	1865	Ditto	

<b>V</b>	
- 0.3(4h	1864 Presidency College.
Mitra, Trailakyanáth,	1865 Dicto
" Trailakyanáth,	1862 Ditto
"Upendranath,	1867 Ditto
Mukhopádhyáy, Giríschandra, Haragovinda,	1867 Ditto
	1862 Ditto
Jadunáth,	1864 Ditto
Jageswar, Jánokínáth,	1867 Ditte
,, Janokinaui, Kailás andra,	1864 Ditto
	1864 Ditto
Káliprasanna,	1867 Ditto
Kánáilál, -Khetraprasád,	1864 Ditto
Krishnamohan,	1863 Ditto
Navinkisan,	1862 Ditto
32	1866 Ditto
,, Nilámbar, Piárimohau,	1864 Ditto
,,	1865 Ditto
Rájmohan,	1865 Ditto
Ramlál, Sambhushan,	1864 Ditto
,, Sasionusnau, Táráprasanna,	1861 Ditto
,,	1862 Ditto
Nandi, Ramánáth,	1862 Dato
Pál, Baikunthanáth,	1867 Ditto
Ráy, Benimádhav,	1867 Ditto
, Dineschandra,	1865 Ditto
" Harináráyan,	1866 Ditto
" Prasannachandra,	1867 Ditto
Sandyal, M. L.	1865 Ditto
Sarkár, Matilál, Pareschandra,	1867 Ditto
,, Pareschandra, Umeschandra,	1862 Ditto
,, Umescrandis,	1864 Ditto
Sen, Baikunthanáth,	1865 Ditto
" Guruprasád, " Rádhakrishna,	1866 Ditto
" Rájkisan,	1867 Ditto
,, Rajkhan,	1866 Ditto
Sil, Brajendrakumár,	1863 Ditto
Corindachandra,	1865 Ditto
Walandralal.	1863 Ditto
,, Manchara.	

Sing, Surjyanáráyan, Twidale, G. ... 1861 Presidency College

... 1867 Ditto

#### 1868.

#### FIRST DIVISION.

# In order of Merit.

Chakravartí, Giríndramohan, Mukhopádhyáy, Rájkrishná, Yusuf, Mahammad, Ráy, Prasannakumár, Bhattáchárya, Dwárikánáth, Sing, Búdhsen, Sen, Akhilchandra, Pál, Amirtalál, .. Presidency College.

.. Ditto

.. Patna College.

.. Presidency College.

.. Ditto

.. Ditto

.. Ditto

.. Ditto

#### SECOND DIVISION.

# In order of Merit.

.. Presidency College. Basu, Birajáprasád, Son, Chandramohan. .. Dacen College. Do, Gaurisankar, .. Presidency College. Ráy, Dhaneschandra, .. Patna College. Basu, Karunádás, .. Presidency College. Bandyopádhyáy, Nilmádhav, Ditto •• Mukhopádhyáy, Navinkrishna, Ditto Chattopádhyáy, Umákánta, Ditto •• Nág, Sambhuchandra, .. Dacca College, Bandyopádhyáy, Avináschandra, .. Presidency Collego. Sarkár, Akhaychandra, Ditto Dás, Krishnachandra, Ditto Sarkár, Krishnachandra, .. Berhampore College. Chattopádhyáy, Giríschandra, No 2, Presidency College.

Singha, Jaygopál .. Ditto

Das, Jadunath, ... Hooghly College.

Das, Jadunath, ... Presidency College.

Ghosh, Dhankrishna, .. Ditto Bandyopádhyáy, Kailáschandra, .. Ditto

Chattopádhyáy, Amarendranáth. .. Presidency College. Bhagavánchandra, Ditto Majumdár, Syámácharan, Ditto Ráy, Káliprasanna, Ditto •• Chattopádhyáy, Kálíprasanna, Ditto Dattá, Umácharan, Ditto •• Bhattachárya, Táriníkanta, Ditto .. Ráychaudhuri, Khetramohan, Ditto Som, Baradáprasanna, \* Ditto ••• Basu, Gopálchandra, Ditto Ráy, Krishnanáth, ... Hooghly College. Síl, Jádavchandra, ... Presidency College. Basu, Mathuránáth. Ditto Chattopádhyáy, Hemchandra, ... Hooghly College. Sámanta, Nilmádhav, ... Presidency College. De. Sivchandra, Ditto Bhar, Trailakyanáth, Ditto Som, Devendralál, ... Hooghly College. Mendies, H. .. Presidency College. Chattopádhyáy, Giríshchandra, Ditto

De, Sambhuchandra,

# CANDIDATES WHO HAVE PASSED THE B. L. EXAMINATION AND WILL BE ENTITLED TO THE DEGREE, 80 SOON AS THEY PASS THE B. A. EXAMINATION.

Ditto

# In alphabetical order.

Bandyopádhyáy, Amirtalál,	•••	1858	Presidency College.
Basu, Nilmádhav,	•••	1858	Ditto
" Upendrachandra,		1862	Ditto
Chakravarti, Dwárikánáth,	•••	1868	Ditto
Chattopádhyáy, Kedárnáth,	•••	1858	Ditto
Chaudhuri, Matilál,	•••	1860	Ditto
Dás, Girijásankar,	•••	1858	Ditto
"Kálímohan,	***	1860	Ditto
Datta, Kedárnáth,	•••	1860	Ditto
Dhar, Asutosh,	•••	1858	Ditto

Forbes, Thomas,	•••	1858 P	residency College	E
Ghosh, Kálicharan,	•••	1859	Ditto	
,, Prabháchandra,	•••	1858	Ditto	
" Ratnalál,	•••	1858	Ditto	
Gregory, C.	••	1860	Ditto	
Gregory, G.	•••	1860	Ditto	
Mitra, Giríschandra,	•••	1861	Ditto	
" Srínáth,	•••	1858	Ditto	
Mukhopádhyáy, Bhuvanchandra,	••	1860	Ditto	
" Harihar,	•••	1858	Ditto	
" Jadunáth,	•••	1862	Ditto	
" Matilál,	•••	1860	Ditto	
Pálit, Knandagopál,	•••	1859	Ditto	
Sarkár, Gopálchandra,	•••	1862	Ditto	
Sen, Prasannakumár,	•••	1862	Ditto	

# LICENTIATES IN LAW.

# In Alphabetical order.

In Inpieco	CULC	10 07	
Kich, Sivehandra,	•••	1868	Presidency College
Bandyopádhyáy, Amvikácharan,	•••	1862	Ditto
" Gopálchaudra,	•••	1867	Ditto
Barál, Navinchánd,	•••	1867	Ditto
Bardan, Mohinimohan,		1866	Ditto
Basu, Abhayádás,		1866	Ditto
,, Amarnáth,	•••	1866	Ditto
,, Haramohan,	•••	1866	Ditto
" Sasibhushan,	•••	1866	Ditto
Cháki, Rámgopál,		1866	Ditto
Chakravarti, Mádhavchandra,	•••	1867	Ditto
Chattopádhyáy, Gaurisaukur,	•••	1866	Ditto
Dás, Nilmaní,		1868	Ditto
"Párvatícharan,	•••	1866	Ditto
Datta, Durgádás,	•••	1863	Ditto
De, Pratápchaudra,	•••	1865	Ditto
Gángopádhyáy, Jagavandhu,	•••	1868	Ditto
Ghosh, Atulchandra,		1867	Ditto
Ghoshál, Kálícharan,		1866	Ditto

A Tives	
Guha, Gangádás, Háldár, Bíreswar, Kirkpatrick, C, Majumdár, Sarveswar, Mallik, Nityagopál, Mukhopádhyáy, Kuladáprasad, "Sasibhushan, Munshi, Rámgopál, Pálit, Táraknáth, Ráy, Dinabandhu, Rooke, H, Sarkár, Jádavchandra, "Maheschandra, Sen, Nalitchandra, Sing, Isánchandra,	1866 Presidency College 1866 Ditto 1868 Ditto 1867 Ditto 1865 Ditto 1867 Ditto 1867 Ditto 1868 Ditto 1868 Ditto 1868 Ditto 1868 Ditto 1867 Ditto 1867 Ditto 1867 Ditto 1866 Ditto 1866 Ditto 1864 Ditto 1864 Ditto 1865 Ditto

# CANDIDATES WHO HAVE PASSED THE L. L. EXAMINATION, AND WILL BE ENTITLED TO THE LICENCE, SO

# SOON AS THEY PASS THE FIRST

# EXAMINATION IN ARTS.

			1863 P	residency	College.
Bandyopádhyáy,	Bhuvanchandra,	•••		Ditto	
	Mutilál,	•••	1863	-	
"	Umoschandra,	••	1863	Ditto	
"			1861	Ditto	
Basu, Lakhichar	au,	• • • •	1863	Ditto	
" Mahescha	ndra,	•••	1863	Ditto	
, Nilmádha	٧,	•••			
Chattopádhyáy,		•••	1862	Ditto	
Chartopadiny	Manulál,	,	1862	Ditto	
**	Sivehandra,		1862	Ditto	
***			1861	Ditto	
Dás, Durgámoh	an,	•••	1861	Ditto	
. Govinchat		•••		Ditto	
Gangonádliváv.	Khetramohan,	•••	1861	_	
Ghosh, Chandr	nkáli.		1861	Ditto	
Ghosn, Changi	Lauden		1863	Ditto	
Majumdár, Siv	chandra,		1002	Ditto	
Mukhopádhyá:	, Atulchandra,	•••	1862	Ditto	
,,	Nilmádhay,	•••	1002	Ditto	
"					

Mukhopádhyấy, Pramathanáth,	•••	1862 1	Presidency College.
" Rámchandra,	•••	1862	Ditto
Ráy, Jadunath,	•••	1861	Ditto
"Kisandayál,	•••	1862	Ditto
" Mritunjay,	•••	1862	Ditto
Sen, Bansidhar,	•••	1862	Ditto
" Nilmádhav,	•••	1861	Ditto
Síl, Ramánáth,	•••	1863	Ditto
" Tulsídás,*	•••	1863	Ditto

# Gold Medals to the value of 100 Rs. each, awarded at the B. L. Degree Examination.

Bandyopádhyáy, Gurudás,	•••	186	Presidency College.
Chakravarti, Girindramohan,	•••	1868	Ditto
Ghosh, Rásvihári,	•••	1867	Ditto
Mitra, Upendranáth,		1862	Ditto
Sen, Baikunthanáth,	•••	1864	Ditto
"Guruprasád,	•••	1865	Ditto

#### ENGINEERING.

#### B. C. E.

Chattopadhyay, Satkari,	•••	1864	Presidency College.
Chaudhuri, Amvikácharan,	•••	1864	Ditto
Majumdár, Rámratán,	•••	1868	Ditto

# Theoretical part of the Examination for the Licence in Civil Engineering.

# In alphabetical order.

Adams, H. M.		1961	Cal. C. E. College.
•	•••		
Atkiuson, A. D.	•••	1865	Presidency College.
Bandyopádhyáy, Rájkisan,	•••	1864	Cal. C. E. Coll.
Chandra, Mahendralál,	•••	1862	Ditto
Chattopádhyáy, Hemchandra,	•••	1862	Ditto
" Mathuránáth,	•••	1861	Ditto .
,, Sátkari,		1862	Ditto

Obtained Special prize for superior merit.

Chaudhuri, Kunjavihárí,		1862	Cal. C. E. College.
Dás, Bholánáth,	•••	1862	Ditto
"Kedárnath,		1864	Ditto
De, Baikunthanáth,	•••	1861	Ditto
"Jádavchandra,	•••	1861	Ditto
" Matilál,	•••	1862	Ditto
Ghosh, Rameschandra,	•••	1862	Ditto
,, Umeschandra,		1861	Ditto
Kumár, Rájkrishna,		1864	Ditto
Mitra, Asutosh,		1864	Ditto
., Párvátícharan,	•••	1862	Ditto
Mukhopádhyáy, Binadchand,	•••	1862	Ditto
" Rámkrishna,	•••	1862	Ditto
Pandit, Surjyakumár	•••	1862	Ditto
Ráy, Dhaneschandra,	•••	1862	Ditto
,, Mádhavchandra,	•••	1862	Ditto
Sarkár, Púrnachandra,	•••	1865	Presidency College.
Sen, Dinanáth,	•••	1861	Ditto

# 1867.

# FIRST DIVISION.

# In order of merit.

Lackersteen, M R.	Presidency College
Ghosh, Khetranáth,	Ditto
Chauduri, Amirtalál,	Ditto
Basu, Bhuvanmohau,	, Ditto

#### SECOND DIVISION.

# In order of merit.

Bandvopádhyáy, Priyanáth, ... Presidency College.
Mukhopádhyáy, Anádinath, ... Ditto

# Gold medals to the value of Rs. 100 each. At L. C. E. Eximination.

Sen, Dinanáth, ... 1861 Cal. C. E. College.

Majumdár, Rámratan, ... 1862 Ditto

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Arts.	
$\dot{i}n$	
Honors	

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In Sanskrit.	CLASS II.	:
	CLASS 1.	Mukhopédhyáy, Nilambar, Sanskrit

CLASS III.

	In Hohron
, ,	

116 1160/1610.	:	In History.	Landel, Manilál, Dov. Coll.
			•

Blochmann, H.

College.

:	:		Som, Jaygovinda, Cal. F. C. Inst.
Presy. Coll.	ditto	Philosophy.	
Sing, Chandranáráyan, Presy. Coll.	Mitra, Mahendralál, ditto	In Mental and Moral Philosophy	:

**:** :

	Mallik, Atulchandra, Presy. Coll.	
In Mathematics.	Dás, Lakhináráyan, Presy. Coll.	In Natural and Physical Science.
	Bandyopádbyáy, Gurudás, Presy. Coll. Dás, Lakhináráyan, Presy. Coll.	

Ráy, Prasannachandra, Presy. Coll.

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oll.
Presy, C
ř,
Rásvihá

Mukhopádhyáy, Kapáliprasanna, Presidency College.

De, Benimádhav, Presy. Coll.	Chattopúdlıyáy, Umákánta, Presy. College.	:
In History.  Bandyopádhyáy, Sasibhushan, Presy. De, Benimádhav, Presy. Coll.  Coll.  Chandra, Jogeswar, Presy. Coll.	_	In Mathematics.  Bhattacharya, Dwárikánáth, Teacher.  In Natural and Physical Science.
Basu, Chandranath, Presy. Coll.	Bandyopádhyáy, Kálicharan, Calcutta P. C. Inst.	

In English.

1867.

Gupta, Kalipada, Medical College.

Mukhopáilliráy, Asutosh, Preey, Coll.

Sen, Kásikánta, Presy. Coll.

In Sanskrit.	Mukhopádhyáy, Krishnachandra,
	Nilmani, Sanskrit Coll.
	Makhopádbyáy,

Sanakrit College.

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Chakravarti, Giríndramohan, Presy.	Sarkár, Kisarilál, Presy, Coll.	Háldár, Rámchandra, Presy. Coll.	Joll.
College.	Basu, Karunádás, ditto	Sen, Prasannakumár, ditto	_
•	:	Ráy, Kálíprasanna, ditto	•
:	:	Mukhopádhyáy, Bechárám, ditto	앍
:	:	Bhattáchárya, Tárinikánta, ditto	tto t

# In Mental and Moral Philosophy.

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Mukhopádhyáy, Rájkrishna, Presy.

College.

	Mathematica	3
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Zoll.
Dacca (
Piárimoban,
Biswás,

De, Gaurisankar, Presy. Coll.

Ghosh, Harichaítanya, Dacca Coll.

1868.

In English.

Bandyopádh; ay, Saratchandra, Prosy. Basu, Jogendranáth, Presy. Coll. College.

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Harikrishna, Sans-	
Chattopadhyay,	Prit College.

Bandyopádhyáy, Táráprasanna,

Presidency College.

Mitra, Rámcharan, Presy. Coll. Ráychaudhuri, Matilál, ditto De, Krishnadás, Cal Free, Ch. Instn. Basu, Trailakyanáth, Cal. Free. Ch.

In Mental and Horal Philosophy.

Instn.

Chattopádhyáy, Nafarchandra, Hooghly College.

:

Mukhopádhyáy, Gopálchandra, Kmír Ali, Hooghly Collego. In History. Presidency College.

In Mathematics.

Bast, Knandmohan, Presy. Coll.

Datta, Benimadhav, Presy. Coll.

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17

#### M. A.

	•			
Bandyopádhyáy	, Avináschandra,	•••		Presidency College.
,,	P. N.	•••		Doveton College.
,,	Rámlál,	•••	1866	Presidency College.
Basu, Prasanna	kumár,	•••	1863	Ditto
Chattopádhyáy		•••	1867	Teacher.
Gui, Sivehandr	Β,	•••	1867	Ditto
Mitra, Bireswa	r,	•••	1863	Presidency College.
" Trailaky	yanáth	•••	1864	Ditto
" Upendr	anáth,	•••	1863	Ditto
Mukhopádhyáy	, Jogeswar,	•••	1863	Ditto
,,	Navinkrishna,	•••	1863	Ditto
37	Navinkrishna,	• • •	1863	Ditto
,,	Piárimohan,	•••	1865	Ditto
Nág, Sambhuc	handra,		1866	Dacca College.
Nandi, Ramán	áth,	•••	1863	Presidency College.
Pál, Bholánáth	١,	•••	1867	Teacher.
Sen, Akhilcha	ndra,		1866	Dacca College.
" Garupras	iád,	•••	1861	Presidency College.
Twidale, G.		•••	1867	Doveton College.
		В. А		
Kli, Kmir,			1867	Hooghly College.
Amad,		•••	1861	Presidency College.
Atmárám,			1865	Agra College.
Bágchi, Haris	chundra,	••	1867	Teacher.
Bandyopádhy	áy, Avináschar	ıdra,		
	No. 1,	••	1866	Presidency College.
,,	Avináschandra, N	o. 2,	1866	Ditto
,,	Bámácharan, B. l	<b>.</b>	1862	Ditto
	Bhairavchandra, l	В L.	1862	Ditto
	Gpináth, B. L.		1861	Ditto
» \	aurudás, B. L.	•••	1864	Ditto
**	Hemchandra, B. I	L	1859	Ditto
,,	Kálícharan,	•••	1865	Cal, F. C. Instn.
21	Kailáschandra, B.	. L.	1867	Presidency College.
9,	Karunámay,	•••	1867	Ditto
,,	Nilmadhav, B. L.	• •••	1866	
27	P.	•••	1867	Doveton College.

idyopádhyáy, Paresnáth, B.	Ĺ	1862	Presidency College.
" Pramadácharan,		1867	Ditto
" Pramathnáth,	•••	1866	Ditto
" Purnachandra,		1867	Queen's College, Benares
" Rámlál,			Presidency College.
" Saratchandra,		1867	Ditto
" Sasibhushan,	•••	1865	Ditto
" Satyadayál,	•••	1866	Ditto
" Táráprasanna,	•••	1867	Ditto
ırdan, Mahinimohan, B. L.	•••	1865	Dacca College.
ısák, Govindchandra,	•••	1867	Ditto
,, Rádhánáth,	,	1861	Cal. F. C. Instu.
" Rahinikumár,		1864	Dacoa College.
asu, Amarnáth, B. L.	•••	1863	Presidency College.
" Ambikacharan, B. L.	•••	1862	Ditto
,, Anandmohan,	•••	1867	Ditto
"Birajáprasad, B. L.		1867	Ditto
" Chandranáth,		1865	Ditto
" Dakhináprasad, B. L.	•••	1863	Ditto
" Devendralál, B. L.	•••	1863	Ditto
,, Dovendranáráyan, B. L.	•••	1860	Ditto
" Dinanáth,	•••	1866 (	Cal, F. C. Instn.
" Gopálchandra, B. L.		1865	Presidency College.
" Jadanáth,	•••	1858	Ditto
" Jogendranáth, No. 2,		1867	Ditta
"Karunádás, B. L.	•••	1866	Ditto
"Khetramohan,	•••	1860	Civil Eng. College.
" Mathuránáth, B. L.		1866	Cal. F. C. Instn.
" Prasannakumár B. L.	•••	1861	Presidency College.
"Rájendrakumár,		1866	Ditto
"Rúkhálchandra,	•••	1866	Ditto
" Rameschandra, B. L.		1863	Ditto
" Rámeswar,		1866	Ditto
"Rámkamal,	•••	1866 (	Cal. F. C. Instn.
" Sasibhushan, B. L.	•••		Dacca College,
" Sitalnath,	•••	1867 I	rendency College,
., Trailakyanáth,	•••	-	Cal. F. C Instu.
Bhar, Trailakyanáth, B. L.	•••	1865 I	Presidency College.

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Bhatta, Nafarchandra, B. L.
                                     1863 Presidency College.
Bhattáchárya, Dwárikánáth, B. L.
                                     1865
                                              Ditto
              Jadunáth.
                                     1867 Kishnaghur College.
               Krishnakamal.
                                     1860 Sanskrit College.
                                 •••
      ••
              Mahendranáth.
                                     1866 Presidency College.
                                 ...
      "
              Tárinikánta, B. L ....
                                              Ditto
                                     1866
Bhumik, Krishnachaitanna.
                                              Ditto
                                     1866
Bisi, Kesavnáth.
                                     1866
                                              Ditto
                                •••
Biswas, Piárimohan.
                                     1866
                                              Ditto
        Rudrakánta, B. L.
                                     1865
                                              Ditto
                                ...
Blochman, H.
                                     1865 Professor, Doveton Coll.
Chakravarti, Girindramohan, B. L.
                                     1866 Presidency College.
             Giríschandra, B. L. ...
                                     1864
                                              Ditto
             Harachandra.
                                     1866
                                              Ditto
     ,,
             Harimohan.
                                     1866
                                              Ditto
                                ...
             Iswarchandra, B. L...
                                     1862
                                              Ditto
     ٠,
             Syámácharan, B. L....
                                     1865
                                              Ditto
Chánd, Ságar,
                                     1864 Agra College.
Chandra, Brajendranáth,
                                     1866 Presidency College.
                                 ...
         Jogeswarchandra,
                                     1865
                                              Ditto
Chattopádhyáy, Amarendranáth, B.L.
                                     1867
                                              Ditto
               Amritalál, B. L. ...
                                     1861
                                              Ditto
               Anukúl
                                     1867
                                              Ditto
       "
               Avinaschandra, ...
                                     1866
                                              Ditto
      ,,
               Bankimchandra, B.L. 1858
                                              Ditto
       ••
               Bhagwanchandra.
                                     1866 Teacher.
               Bipradás,
                                    1867 Calcutta F. C. Instn.
               Girischandra, B. L.
                                    1865
                                              Ditto
       21
               Giríschandra, B. L.
                                    1867
                                              Ditto
       ,,
               Hankrishna.
                                ...
                                    1867
                                              Ditto
       .,
               Hemchandra, B. L.
                                    1865 Teacher.
               Jadunáth, B. L. ...
                                    1860 Presidency College.
       .
               Kálináth.
                                    1867 Dacca College.
               Káliprasanna, B. L.
                                    1866 Calcutta F. C. Instn.
               Kisarimohan,
                                    1865 Doveton College.
                                ...
       ,,
               Krishnachandra.
       99
                 B. L.
                                     1864 Presidency College.
                                ...
               Mahimahandra, ...
```

1867 Dacca College.

Chattopádhyáy, Nafarchandra,	•••	1867 Hooghly College.
" Pratápchandra, l	B. L.	1859 Presidency College.
" Rajanínáth,	••	1862 Teacher.
" Sivehandra,	•••	1864 Presidency College.
" Syámácharan,	•••	1866 Medical College.
" Taráprasád,	•••	1859 Presidency College.
" Umákánta, B. L.		1865 Ditto
Chaudhuri, Girischandra, B. L.	•••	1863 Ditto
Dás, Chandrakumár, B. L.	•••	1865 Ditto
,, Dámadar,	•••	1866 St. John's College, Agra-
,, Harischandradás,		1866 Calcutta F. C. Instu.
" Jadunáth, B. L.	•••	1867 Ditto
"Krishnachandradás, B. L.	•••	1866 Ditto
" Lakhináráyan,	•••	1864 Presidency College.
"Nilmaní,		1865 Ditto
" Párwaticharan,	•••	1867 Teacher.
,, Sarwánanda,		1865 Presidency College.
"Táráprasanna, B. L.	.,.	1862 Ditto
Datta, Akhaychandra,		1866 Ditto
"Benimádhav,		1867 Ditto
" Cháruchandra,	•••	1865 Ditto
" Durgádás,	•••	1862 Ditto
"Kálíkádás, B. L.	•••	1860 Ditto
,, Lálgopál, B. L.		1859 Ditto
" Taraknáth, B. L.	•••	1860 Ditto
" Umácharan, B. L.	•••	1867 Calcutta F. C. Instr
,, Umeschandra.		1867 Tencher.
D'Cruz, L. W.	•••	1865 Doveton College.
De, Amritalál,	•••	1867 Calcutta F. C. Instn.
"Benimádhav,	•••	1865 Presidency College.
"Gaurisankar, B. L.	•••	1866 Ditto
"Jádavchandra, B. L.	•••	1866 Ditto
"Krishnadás,	**1	1867 Calcutta F. C. Instn.
" Matilal,	•••	1864 Medical College.
,, Navinchandra, B. L.	•••	1860 Presidency College.
"Rájmohan,	••	1867 Dacca College.
" Sambhuchandra, B. L.	•••	1866 Calcutta F. C. Instn.
" Sivchandra, B. L.	•••	1866 Presidency College.

Dev, Mádhavcha	andra,	•••	1865	Queen's College, Benares.
Dhar, Kálináth,		•••	1866	Dacca College.
" Nilmaní,		•••	1866	Teacher.
" Syámchái	nd, B. L. ·	•••	1867	Hooghly College.
Dáem, Mohámas	d,		1865	Presidency College.
Evans, R. W.	•	•••	1861	Bishop's College.
Forbes, A. H.		•••	1864	Doveton College.
Gangopádhyáy,	Jagabandhu,	•••	1867	Presidency College.
,,	Navinchandra, E	3. L.	1860	Ditto
"	Ravichandra, B	. L.	1863	Ditto
,,	Syámácharan,	•••	1860	Ditto
Ghosh, Avinásch	handra,	•••	1863	Ditto
,, Anantar	ám, B. L.	•••	1863	Ditto
" Aghorné	ith, B. L.	•••	1863	Ditto
" Chandre	amohan,	•••	1865	Medical College.
" Devendi	rachandra,	•••	1865	Presidency College.
" Dhankri	ishna, B. L.	•••	1866	Calcutta F. C. Instu.
" Govinda	chandra,	••	1866	Presidency College.
" Haricha	itan <b>na,</b>	•••	1866	Dacca College.*
", Jaygopá	1,	•••	1866	Calcutta F. C. Instn.
" Pratápc	hand <b>ra,</b>	•••	1865	Presidency College.
" Rásvihá:	ri,	•••	1865	Ditto
" Shrischt	ınd <b>ra,</b>	•••	1859	Ditto
"; Tárinich	iaran,	•••	1866	Ditto
" Tármíkt	•	•••	1866	Ditto
Goswámi, Hera		•••	1864	Ditto
Guha, Piárilál,		•••	1863	Ditto
Gui, Sivehandr	•	•••		Teacher.
Gupta, Kálipad	•	•••		Medical College.
Háldár, Brajalá	•	•••		Calcutta F. C. Instn.
"	chandra,	•••		Presidency College.
,, Rámche	•	•••	1866	Ditto
" Syámlá	l, B. L.	•••	1864	Ditto
Harris, F.		•••		Agra College.
Hosen, Saed,	•	•••		Presidency College.  Dacca College.
Islám, Sirájal, Lethbridge, W.	v	•••		Bishop's College,
Maitra, Radhag		•••	1859	Ditto
-men a' resour &	VIII.	•••	1000	2.00

Majumda	ír, Jagaddurlabh, B. L.	•••	1865	Teacher.
,,	Kailáschandra,	•••	1866	Presidency College.
,,	Pratápchandra,	•••	1867	Ditto
,,	Rámratan,	•••	1861	C. E. College.
"	Syámácharan, B. L.	١	1867	Presidency College.
Mallik, A	túlcharan, B. L.	•••	1864	Ditto
,,	Balarám, B. L.		1864	Ditto
"	Premchánd,	•••	1865	Ditto
,,	Srikánta, B. L.		1863	Ditto
,,	Upendrachandra, B. L.	•••	1865	Ditto
Mendies,	, H. E., B. L		1866	Doveton College.
Mitra, B	enimádhav, B. L.	•••	1864	Presidency College.
"В	íreswa <b>r</b> ,		1861	Ditto
" D	wárikánáth,	•••	1866	Ditto
,, G	iríschandra,		1864	Ditto
,, J	idunáth,	•••	1867	Calcutta F. C. Instn.
,, M	lahend <b>ralál,</b>	•••	1864	Presidency College.
,, M	lahendranáth,		1866	Ditto
" N	arsingchandra, B. L.	•••	1863	Ditto
", Р	rasannabadan,	•••	1865	Queen's Coll. Benares.
"Р	úrnachandra, B. L.	•••		Teacher.
,, R	ámcharan,	•••	1867	Presidency College.
,, R	ameschandra, B. L.		1860	Ditto
"Т	árávilás, B. L.		1863	Ditto
"Т	railakyanáth, B. L.	•••	1863	Ditto
Mukhopa	ádhy <b>áy,</b> Asutosh,		1866	Ditto
,	, Byáchárám,	•••	1866	Ditto
,	, Dinanáth,	•••	1863	Teacher.
,	, Gangáprasád,		1861	Presidency College.
	, Giríschandra,	•••	1866	Ditto
	, Gopálchaudra,			
	No. 1,	•••	1867	Ditto
,	, Haragovinda,	•••	1866	Ditto
,	, Jadunáth, B. L.	•••	1861	Ditto
,	, Jadunáth,	•••		Kishnaghur College.
,		•••	1865	Presidency College.
,			1862	Ditto
	, Kailaschandra, B	L.	1863	Ditto

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Mukhopádhyáy,	Kálíprasanna, B. L.	1863 I	Presidency College.
"	Kánáilál,	1864	Ditto
<b>&gt;)</b>	Kapáliprasanna,	1865	Ditto
"	Khetraprasád, B. L.	1862	Ditto
,,	Krishnamohan, B.L.	1862	Ditto
33	Narsingchandra,	1866	Ditto
>,	Navinkisan, B. L	1863	· Ditto
,,	Navinkrishna,	1860	Ditto
>,	Nilambar, B. L	1864	Ditto
,,	Nilmaní,	1866	Ditto
**	Niváranchandrá,	1865	Ditto
21	Piárimohan, B. L.	1862	Ditto
23	Rájkrishna, B. L	1866	Ditto
2)	Rájmohan, B. L.,	1862	Ditto
13	Rámlál, B. L	1859	Ditto
13	Sasibhushan, B. L.	1863	Ditto
,,	Satyánáth,	1867	Teacher.
"	Táráprasanna, B. L.		Presidency College.
Nág, Sambhuch	andra, B. L	1865	Dacca College.
Nandan, Hemc	handra,	1867	Teacher.
Naudi, Ramáná	th, B. L	1861	Presidency College.
Pal, Amritulál,	B. L	1863	Ditto
" Baikantha	náth, B. L	1861	Ditto
" Benimádhe	٠٠٠,	1866	Calcutta F. C. Instn.
" Bholánáth,	•••		Presidency College.
Pálit, Táraknát	•	1866	Ditto
Pánre, Jánokim	·		Berhampore College.
Parel, Bhúvann	nohan,		Calcutta F. C. 1nstn.
Phillips, A. S.			Teacher.
Ráy, Akhaykur			Presidency College.
" Baikantho	máth,		Dacca College.
,, Báránasi,			Presidency College.
"Benimádl	· •	1866	Ditto
" Bholánáth	· .		Queen's Coll. Benares.
" Chandrak			Teacher.
	andra, B. L		C. E. College.
, Dineschar	•		Presidency College.
,, Haralál,	•••	1862	Ditto

Ráy, Harináráyan, B. L.		1864	Teacher.
"Kálíprasanna, B. L.	•••	1866	Presidency College.
,, Kesavchandra,	•••	1866	Ditto
, Kisannáth, B. L.	•••	1866	Ditto
" Mádhavchandra,	•••	1862	C. E. College.
" Madhusudan,		1864	Presidency College.
, Párwatícharan	••	1862	Teacher.
" Piárilál,	•••	1866	Presidency College.
,, Prasaunachandra, B. L.	•••	1864	Ditto
" Prasannakumár, B. L.	•••	1867	Calcutta F. C. Instn.
,, Rájchandra,		1867	Presidency College.
Ráychaudhuri, Khetramohan, B.	L.	1866	Caláutta F. C. Instn.
" Matilál,		1867	Presidency College.
Sámanta, Nilmádhav, B. L.	•••	1866	Calcutta F. C. Instn.
Sándel, M. L., B. L.			Doveton College.
Sániál, Chandrasekhar,	•••	1866	Queen's Coll. Benares.
" Umeschandra,	•••	1866	Ditto
Sarkár, Akhaychandra, B. L.	•••		Hooghly College.
,, Káliprasanna,	•••	1866	Presidency College.
" Kisarilál,	•••	1866	Ditto
" Krishnachandra, B. L.	•••	1866	Ditto
", Matilál, B. L.	•••	1862	Ditto
" Pareschandra,	•••	1866	Ditto
., Umeschandra, B. L.	•••	1861	
" Umeschandra,	•••		Calcutta F. C. Instn.
Sarvádhikári, Rájkumár,	•••		Presidency College.
Sen, Akhilchandra, B. L	•••	1864	Ditto
" Baikanthauáth, B. L.	•••	1863	Ditto
" Chandramohan, B. L.	•••		Dacea College.
,, Dinanáth,	•••	1865	Ditto
,, Guruprasád, B. L.	•••		Presidency College. Ditto
"Kasikánta,	•••	1866 1860	Ditto
" Prasannakumár,	•••	1864	Ditto
"Rádhákrishna, B. L.	•••	1866	Ditto
"Rájkisan,	•••	1867	Ditto
"Sáradáprasád,		1866	Ditto
, Sasibhushan, B. L.	•••		Dacca College.
Sen, Sasibhushan,	•••	1001	

Síl, Brajendrakumár, B. L.	•••	1862 Presidency College.
" Govindachandra, B. L.	•••	1864 Ditto.
" Jádavchandra, B. L.	•••	1866 Ditto.
"Káuáilál, …	•••	1865 Ditto.
,, Mahendralál, B. L.	***	1862 Ditto.
Simmons, W. J.	•••	1864 Doveton College.
Sing, Budhsen, B. L.	•••	1867 Presidency College.
" Chandranáráyan,	•••	1864 Ditto
" Ramáprasanna,	•••	1867 Ditto
" Suryanáráyan, B. L.	•••	1860 Ditto
" Jaygopál, B. L.	•••	1867 Calcutta F. C. Instn.
Som, Baradáprasanna, B. L.	•••	1866 Ditto
" Brajavihárí,	•••	1867 Ditto
" Devendralál, B. L.	•••	1867 Hooghly College,
" Jaygovind,		1865 Calcutta F. C. Instn.
Tiery, F. T. II.	•••	1862 Doveton College.
Twidale, G. A.	•••	1865 Ditto
Yusoof, Mahámad, B. L.	•••	1867 Presidency College.

# 1868.

#### FIRST DIVISION.

# In Order of Merit.

Dutta, Jagatbandhu,	•••	Presidency College.
Ráy, Chandrakumar,	•••	General Assembly's Institution-
Dev, Upendrachandra,	•••	Presidency College.
Chakravarti, Taránath,	•••	Calcutta Free Church Instn.
Láhé, Jagabandhu,		Dacon College.
Chattopádhyáy, Pratulchandra,		General Assembly's Institution.
Bandyopádhyáy, Kailaschandra	***	Patna Collego.
Datta, Mahendranáth,	•••	Presidency College.
Mitra, Upendranáth,		Ditto
Chattopádhyáy, Mathuránáth,		Dacca College.
Ghosh, Khesachandra,		Presidency College.
Sáhá, Gopálchandra,		Calcutta Free Church Instn.

Basák, Jagaddurlabh, Dás, Jagatchandra,

Bandyopádhyáy, Sivchandra,

Jádavchandra, B. M....

Basu, Mahendranáth, Gupta, Gopálchandra. Ratanchand,

Basu, Syamkisar,

Presidency College.

General Assembly's Institution.

Patna College.

Medical College.

Hooghly College.

Presidency College.

Agra College.

Dacca College.

#### SECOND DIVISION.

# In Alphabetical Order.

Addya, Asntosh, Bandfopádhyáy, Haricharan,

Mahendranáth. ..

S. N. ,,

Tárápada,

Bháranprasád, Bhanja, Kálídás, Bhuttáchárya, Haranáth,

Durgákumár,

Basu, Bihárilál,

Jogendranáth,

Khetramohan,

Udaychandra,

Chattopádhyáy, Pitamwar, Chaudhuri, Jogendranáth,

Kálikrishna, Chakravarti, Isánchandra, Dás, Baikanthanáth,

" Dinanáth.

.. Govidachandra,

Datta, Bipinvihári,

Baláichand,

Harisankar,

Dhar, Dinanáth,

Hooghly College.

Calcutta Free Church Instn.

Presidency College.

Doveton College.

Kishnaghur College. ...

Delhi College.

Presidency College. ...

General Assembly's Institution

Presidency College.

Teacher. ...

Calcutta Free Church Instn.

Presidency College.

Ditto

Hooghly College.

Presidency College.

Ditto

General Assembly's Institution.

Dacca College.

Calcutta Free Church Instn.

Dacea College.

Presidency College.

Ex-Student, Hoogily College.

Teacher.

Ghosh, Mahimchandra, Presidency College. Queen's College, Benares. Rámrup, Ghoswámi, Jádavchandra, Presidency College. Gupta, Rádháraman, Ditto Khán, Ramdurlabh, Teacher. Láhuri, Rameschandra. Presidency College. Lewis, George, Lahore Mission School. Mitra, Avináschandra, Presidency College. Rajanínáth. Hooghly College. Mukhopádhyáy, Gopálchandra, Presidency College. Obed-al-Rahmán. Berhampore College. Pál, Kártikchandra, Hooghly College," ٠,, " Srínáth, Ditto Páthak, Rámratan, Ditto Ráy, Kisurimohan, Presidency College. Sen, Baradágovinda, Ditto Jaykrishna, Ditto Kamalakanta. Ditto Krishnavihari, Ditto General Assembly's Institution. Navinchandra, ... Tiery, E. R. T. Doveton College. Talápátra, Rámjádav, Berhampore Cellege. Younan J. Presidency College.

#### THIRD DIVISION.

### In Alphabetical order.

•••	Teacher.
••	Berhampore College.
•••	Calcutta Free Church Instn.
•••	Kishnaghur College.
,	Queen's College, Benares.
·,	Hooghly College.
lra,	Calcutta Free Church Instn.
•••	Presidency College,
•••	Ditto
•••	General Assembly's Institution.

Dás, Thákur,

Datta, Bháratchandra,

Rámgopál,

Sasibhushan,

Gangopádhyáy, Binadvihári,

Ghosh, Atalvihari, Ghosh, Becháram,

Umeschandra,

Gupta, Rámgati, Háldár, Matilál,

Jordár, Mahimchandra,

Maitri, Harivalabh,

Mal, Sanjhi,

Mallik, Bihárilál,

Mitra, Binodvihári,

Púrnachandra, Mukhopádhyáy, Bipradás,

Gopimohan,

Ráy, Sudhánsubhushau,

Sen, Anandagopál,

.. Dmavandhu,

Kamalákanta,

Lahore Mission School.

General Assembly's Institution

Berhampore College.

Presidency College.

Kishnaghur College.

Presidency College.

Calcutta Free Church Instn.

Patna College.

Calcutta Free Church Instn.

Teacher.

Berhamporo College. ...

... Teacher.

Lahoro College.

Hooghly College. ...

Presidency College. ...

Calcutta Free Church Instn.

Kishnaghur Collego. ...

Calcutta Free Church Insta.

Ditto

Teacher.

Ditto

Ditto

... Moharaja Vizianagram's Scholarship of Rs. 50 per month, tonablo

...

for one year, awarded at the B. A. Degree Examination. Chakravarti, Girindiamohan, ...

Basu, Knandmohan,

Datta, Jagatbandhu,

1868 Presidency College.

Ditto 1867

1868 Ditto

# FIRST EXAMINATION IN ARTS. 1866.

### FIRST DIVISION.

#### In order of merit.

Mitra, Kártikchundra, Datta, Rameschandra, Blochmann, J.

Presidency College.

Ditto

Doveton College.

Bandyopádhyáy, Sivnáth, Kishnaghur College. Chattopádhyáy, Bireswar, Sanskrit College. Presidency College. Baruá, Knandarám, Basu, Trailakyanáth, Ditto General Assembly's Instn Kunjavihári, ... Set. Ráigndranáth. Presidency College. Ghosh, Rájendranáth, Ditto ... Sankara, Lakshmi, Queen's College, Benares. Younan, E. St. Xavier's College. ... Gupta, Bihárílál, Presidency College. ... Páin, Chandrakanta, Kishnaghur College. ..

#### SECOND DIVISION.

# In Alphabetical order.

Calcutta Free Church Ins Bandyopádhyáy, Indranáth, Jaygopal, Hooghly College. • • • Púrnachundra, ... Presidency College. Syámácharan, Patna College. ... ٠. Basu, Bipinvihári, Hooghly College. ... Presidency College. Mahitchandrá, ... " Rajanínáth, Dacca College. ... Bhattachárya, Adityarám, Queen's College, Benares ... Srinath, Sanscrit College. ... St, Xavier's College. Bradley, R. ٠., Chattopádhyáy, Akhaykumár, Patna College. Kedárnáth. Presidency College. Srigopál, Kishnaghur College. •• Umeschandra, II.... Hooghly College, Dacca College. Dás, Lálmohan, Datta, Gopálchandra, Teacher. ... Mahendranáth, Queen's College, Benarcs Rámkamal, Kishnaghur College. Bishop's College. Roger, . Trailakvanath. Presidency College. ••• De, Nityanda, Ditto Gangopádhyay Kisarimohan, Ditto

# THIRD DIVISION.

# In Alphabetical order.

Baksi, Kedárnáth, Bandyopádhyáy, Bihárílál, Dinanáth, Durgácharan, Gopálchandra, Hemchandra, Jadunáth, Kisarimohan, Sáradáprasád, Sasibhushan, Basu, Kálíkumár,	 	Presidency College. Serampore College. Ditte Sanskrit College. Kishnaghur College. Cathedral Mission College. Calcutta Free Church Insta. Presidency College. Calcutta Free Church Insta. Presidency College. Berhampore College.
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Basu, Kumadbandhu,	Dacca College.		
" Sasibhushan,	Hooghly College.	Hooghly College.	
Bhattacharya, Avináschandra,	Calcutta Free Church Inst	n,	
,, Jivánand,	Sanskrit College.		
Biswas, Hiralál,	Calcutta Free Church Inst.	n,	
Chakravarti, Gopálchandra,	Dacca College.		
", Tárakbandhu,	Ditto		
Chattopádhyáy, Annadáprasád,	Hooghly College.	Hooghly College.	
, Atulchandra,	General Assembly's Instn.		
,, Rájendranáth,	Presidency College.	•	
Dán, Parmeswar,	Calcutta Free Church Insti	a.	
" Binadvihárí,	Presidency College.		
" Hariprasád,	Dacca College.		
" Jamná,	Delhi College.		
Datta, Syámácharan,	General Assembly's Instn.		
De, Govindachandra,	Ditto	Ditto	
" Maheschandra,	Cathedral Mission College.		
"Nandulál,	Hooghly College.		
Ford, A.	St. Xavier's College.		
Gangopádhyáy, Bhagavatíchara	, Calcutta Free Church Inst	n.	
" Chandrakumár,	Ditto •		
" Chandrakumár, Ghosh, Bhuvanmohan,	Ditto * Berhampore College.		
Ghosh, Bhuvanmohan,			
Ghosh, Bhuvanmohan, ,,, Gopálchandra, ,, Rákhálchandra,	Berhampore College.		
Ghosh, Bhuvanmohan, ", Gopálchandra, ", Rákhálchandra, ", Umácharan,	Berhampore College Presidency College.		
Ghosh, Bhuvanmohan, ", Gopálchandra, ", Rákhálchandra, ", Umácharan, Gray, J.	Berhampore College Presidency College Hooghly College Ditto Doveton College.		
Ghosh, Bhuvanmohan, ,,,, Gopálchandra, ,,, Rákhálchandra, ,,, Umácharan, Gray, J. Khán, Dost Mohammad,	Berhampore College Presidency College Hooghly College Ditto Doveton College St. John's College, Agra.		
Ghosh, Bhuvanmohan, ,,,, Gopálchandra, ,,, Rákhálchandra, ,, Umácharan, Gray, J. Khán, Dost Mohammad, ,, Mohammad Syed,	Berhampore College Presidency College Hooghly College Ditto Doveton College St. John's College, Agra Bareilly College.		
Ghosh, Bhuvanmohan, ,,,, Gopálchandra, ,,, Rákhálchandra, ,,, Umácharan, Gray, J. Khán, Dost Mohammad, ,,, Mohammad Syed, Lál, Basí,	Berhampore College Presidency College Hooghly College Ditto Doveton College St. John's College, Agra Bareilly College Dolhi College.		
Ghosh, Bhuvanmohan, ,,,, Gopálchandra, ,,, Rákhálchandra, ,,, Umácharan, Gray, J. Khán, Dost Mohammad, ,,, Mohammad Syed, Lál, Basí, ,, Mákhan,	Berhampore College Presidency College Hooghly College Ditto Doveton College St. John's College, Agra Bareilly College Dolhi College Agra College.		
Ghosh, Bhuvanmohan, ,,,, Gopálchandra, ,,, Rákhálchandra, ,,, Umácharan, Gray, J. Khán, Dost Mohammad, ,,, Mohammad Syed, Lál, Basí, ,, Mákhan, ,, Fiáre,	Berhampore College Presidency College Hooghly College Ditto Doveton College St. John's College, Agra Bareilly College Delhi College Agra College Bareilly College.		
Ghosh, Bhuvanmohan, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Berhampore College Presidency College Hooghly College Ditto Doveton College St. John's College, Agra Bareilly College Agra College Bareilly College Bareilly College Hooghly College.		
Ghosh, Bhuvanmohan, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Berhampore College Presidency College Hooghly College Ditto Doveton College St. John's College, Agra Bareilly College Delhi College Agra College Bareilly College Hooghly College Presidency College.		
Ghosh, Bhuvanmohan, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Berhampore College Presidency College Hooghly College Ditto Doveton College St. John's College, Agra Bareilly College Delhi College Agra College Hooghly College Hooghly College Presidency College Ditto		
Ghosh, Bhuvanmohan, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Berhampore College Presidency College Hooghly College Ditto Doveton College St. John's College, Agra Bareilly College Delhi College Agra College Bareilly College Hooghly College Presidency College Ditto General Assembly's Iustu.		
Ghosh, Bhuvanmohan, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Berhampore College Presidency College Hooghly College Ditto Doveton College St. John's College, Agra Bareilly College Delhi College Agra College Hooghly College Presidency College Ditto General Assembly's Instn Presidency College.		
Ghosh, Bhuvanmohan, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Berhampore College Presidency College Hooghly College Ditto Doveton College St. John's College, Agra Bareilly College Delhi College Agra College Bareilly College Hooghly College Presidency College Ditto General Assembly's Iustu.		

Mukhopádhyáy, Avináschandra, ... Presidency College. General Assembly's Instn. Biharílál. " Dinanáth, Cathedral Mission College. Hirálal. Hooghly College. ••• Hariprasanna. Kishnaghur College. •• Nandalál, Cathedral Mission College. Nág, Mahendranáth, Ditto Nandi, Jaharilál, Hooghly College. Prasad, Shio, Presidency College. ... Tulsí. Patna College. ••• Ráy, Jogendranáth, Berhampore College. " Prakáschandra, General Assembly's Instn. Samádhár, Rájendranáth. Cathedral Mission College. ... Sarkár, Jogendranáth, Presidency College. Jogeschandra, Hooghly College. ••• Cathedral Mission College. Kedárnáth, Krishnagopál, ... " Calcutta Free Church Instn. Sáradáprasád, Presidency College. Sarmé, Kálimohan, Dacca College. Sen, Kálicharan, Presidency College. "Kálikumár, Hooghly College. ••• Calcutta Free Church Instn. Sing, Khirodákumár, ... " Priyanáth, Ditto ... Súr, Kálídás, Hooghly College.

#### 1867.

#### FIRST DIVISION.

#### In order of Merit.

Presidency College. Mitra, Sáradácharan, ••• Ditto Mukhopádhyáy, Girijabhushan, Sanscrit College. Sarkár, Golápohandra, ... Calcutta Free Church Instn. Mukhopádhyáy, Umákálí, Presidency College. Basu, Bipinkrishna, ... Hooghly College. Bandyopádhyáy, Nilratna, ... Calcutta Free Chu roh Instn. Dás, Brajendramohan, ...

Majumdár, Chandramohan,	•••	Kishnaghur College.
Chakravarti, Chandramohan,		Berhampore College.
Ráy, Bámácharan,	•••	Ditto
Basu, Giríschandra,		Presidency College.
( Másánta, Parvaticharan,		Ditto
Ráy, Syamchánd,		Kishnaghur College.
Datta, Baidyanáth,		Cathedral Mission College.
Chattopádhyáy, Priyanáth,		General Assembly's Instn.
Basu, Akhaykumár,		Dacca College.
Datta, Bipinvihárí,		Presidency College
Ráy, Rúdhánáth,		Ditto
Chaudhuri, Srishchandra,		Ditto
Ghosh, Sureschandra,		Ditto
Bandyopádhyáy, Jogendranáth,		Sanskrit College.
Mukhopádhyáy, Bípinvihárí,		Kishnaghur Colloge.
O'Sullivan, E.		St. Xavier's College.
Datta, Priyanáth,	·	Patna College.
Ghosh, Devendranáth,		Presidency College.
Sinha, Khirodnáth,		Sanskrit College.
Cupta, Jagadiswar,		Kishnaghur College.
Ghosh, Chandrakumar,	•••	Ditto
Chattopádhyáy, Aghornáth,		Calcutta Free Church Instn.
Bundy opadhyay, Binodvihari	í,	Presidency College.
Basu, Balakkrishna,		Ditto
Chattopadhyay, Jogeschand	ra, .	. Kishnaghur College.
Sharman, S. T.		G: T 1 1 (1.11 A
Achárya, Bálkrishna,		. Queen's College, Benares.
Mitra, Madanmohan,		. Presidency College.
Bandyopádhyáy, Gopálchand	lra,	. Kishnaghur College.
1 Son, Lálgopal,		. Ditto
Bandyopádhyáy, Gangádhur	·,	. Presidency College.
Basu, Durgárám,		. Ditto

# SECOND DIVISION.

# In Alphabetical order.

Amad, Niaz, ... Bareilly College.

Ali, Yousuf, ... Delhi College.

Bandyopádyáy,	Binadvihárí,

" Nabakishun,

, Revaticharan,

Bári, Abdul,

Basu, Basantakumár,

" Fanindramohan,

" Jogendrachandra,

" Umeschandra,

" Upendranáth,

Chattopádhyáy, Jitendranáth,

" Kedárnáth,

Chakravarti, Mahimchandra,

, Priyanáth,

., Srínáth,

Chaudhuri, Annadáprasád,

, Nītáigovinda,

,, Rajanikánta,

Chitty, J. C.

Constantine, A.

Dás, Ishwarchandra,

.. Madhusudan.

Datta, Chandrabhushan,

, Ishanchandra,

.. Narasingha,

.. Priyanáth,

. Rádhakrishna.

De, Gaurcharan,

.. Mahendranáth,

" Abhayácharan,

Dev, Tripurácharan,

Elha, J. H.

Gangopádhyáy, Chintámani,

,, Rajanikanta,

" Upendranáth,

Ghosh, Amirtalál,

. Atulkrishna.

. Lálmohan,

.. Nilmaní,

... Patna College.

.. Berhampore College.

... Dacca College.

... Cathedral Mission College.

... Dacca College.

.. L. M. S. Instn. Bhowanipore.

.. Cathedral Mission College.

... L. M. S. Instn. Bhowampore.

... Presidency College.

... Hooghly College.

... Presidency College.

... Calcutta Free Church Instn.

... Serampore College.

... Kishnaghur College.

... Berhampore College.

... Cathedral Mission College.

... Dacca College.

... Queen's College, Colombo.

.. St. Xavier's College.

.. Dacca Collego.

... L. M. S. Instn. Bhowanipore.

... Cathedral Mission College.

.. General Assembly's Iretn.

. Doveton College.

... Presidency College.

... Patna College.

... Dacca College,

... Presidency College.

... Kishnaghur College.

... Cathedral Mission College.

.. Doveton College,

... Presidency College.

... Hooghly College

.. L. M. S. Instn. Bhowanipore.

... Presidency College.

Ditto

Kishnaghur College.

.. Presidency College.

Ghosh, Prasanna	akumár.	•••	Kishnaghur College.	
", Rámlál,	D (1/1		Berhampore College.	
" Srídhar,			Calcutta Free Church Instn.	
Ghoshál, Gopálc	handra.		Ditto	
, Pudmán		•••	Hoogly College.	
Gomes, W.		•••	St. Xavier's College.	
Goswámi, Maher	ndralál.	•••	Calcutta Free Church Instn.	
Guha, Brajendra		•••	Dacca College.	
Kar, Kailásnáth		•••	Calcutta Free Church Instn.	
Khán, Mohomm	•	•••	Agra College.	
" Ramgopál		•••	Kishnaghur College.	
Kishor, Nand,	•	•••	Delhi College.	
Lál, Chidá,		•••	Bareilly College.	
,, Kishen, II.			Ditto	
Majumdár, Anas	ndanáth,	•••	Dacca College.	
Mandal, Heman			Presidency College.	
•	Mitra, Bhavánicharan,		Patna College.	
Mukhopádhyáy, Chandrabhushan		n,	Kishnaghur College,	
,,	174-4:141		Presidency College.	
,,	Khetramohan,	•••	Ditto	
**	Mahondranáth,	•••	Berhampore College.	
1,	Rámdhau,	•••	L. M. S. Instn. Bhowanipore.	
<b>6</b> 5,	Srícharan,	•••	Calcutta Free Church Instn.	
Murray, C. M.		•	Doveton College.	
Náth, Dina,		•••	Lahore Mission College.	
Nág, Bámáchar	an,	•••	Presidency College.	
" Jagathand	lhu,	•••	Dacca College.	
Pál, Rádháballa	ibh,	•••	Hooghly College.	
,, Tej,		•••	Agra College,	
Prámánik, Jasa		•••	Kishnaghur College.	
Ráy, Bipinvihá		•••	Dacca College.	
" Devendra	· ·	•••	L. M. S. Instn. Bhowanipore.	
" Mahendra	•	•••	Cathedral Mission College.	
" Syámáchs		•••	Dacca College.	
Saháy, Jadunát		•••	Presidency College. Kishnaghur College.	
Sarkar, Madan		•••	Dacca College.	
Son, Bhuvanme		•••	Ditto	
,, Hariolfara	<b></b> ,		1/1660	

Sen. Krishnakumár, Ditto " Shasibhushan. Ditto .. Trailakyanáth, Hooghly College ... Singha, Anandachandra, Ditto Madhusudan (Junior,) Berhampore College. Sarmá, Gyanchandra, Presidency College.

#### THIRD DIVISION.

#### In Alphabetical order.

Bágchi, Gopálkrishna, Berhampore College. Bandyopádhyáy, Bhuvanmohan, ... Presidency College. Gurunáth. Dacca College. Jadupati, Borhamporo Collego. ... Khotranáth. Teacher. . . . Queen's College, Benares. Syámácharan, ٠.. Basák, Panchkauri, Cathedral Mission College. Basu, Bihárílál, Medical College, Presidency College. Homelandra, Pratápchandra, Ditto ... Umeschandra. Hooghly College. ... Barát, Chaitannaprasád, Patna Collego. Bardalay, Madhavchandin, Cathedral Mission College. Bhattachárya, Mahendranáth, Presidency College. Chandra, Upendranáth, Ditto . . . Chaudhuri, Késipati, Calcutta Free Church Instn Chuttopadhyay, Kirtichandra, Patna Collego. Dás, Fatikchandra. Teacher. .. Hemnath. Cathedral Mission College. " Janaki. Delhi College, ... Datta, Janakinath, Presidency College. ... Piárilál. Serampore College. Shambhanáth. Dacca College. Dev, Jogendrauath, Presidency College. Dhar, Muráh, St. John's College, Agra. Gangopádhyáy, Chandramohan, Kishnaghur College. Goswami, Gyáupatgiri, Joynarain's College, Benarca. Guha, Basantakumár, Calcutta Free Church Instn.

•••

• •

Gupta, Mahánanda,

Kisor, Jugal,

Kumár, Pránkríshna,

Lál, Dari,

" Házári,

" Kishen, I.

Maitra, Bhuvanmohan,

" Syámácharan,

Majumdár, Gungádhar,

" Rámdayál,

Mallik, Mahendranáth,

Misri, Lachináráyan,

Mukhopádhyáy, Akhaykumár,

" Matilál,

" Nagendranáth,

" Parcsnáth,

" Umácharan,

Náth, Bholá,

" Shio,

Neugi, Nandalál,

Palit, Harináth,

Panjá, Neisinghamurári,

Prasád, Deo,

Rahím, Abdur,

Ray, Bipinchandra,

,, Brajanáth,

" Harkumár,

Raychaudhuri, Rámohandra,

Rudra, Asutosh,

Sánial, Prasannakumár,

Son, Bipinvíhácí,

,, Harináth,

" Harischandra, II.

" Kánailál,

"Rákháldás,

Síl, Chunilál,

Wigeyesakere, H. D.

... Hooghly College.

... Bareilly College.

... Calcutta Free Church Instn.

... Bareilly College.

... Ajmere School.

... Bareilly College.

... Berhampore College.

... Kishnaghur College.

... Cathedral Mission College.

... Patna College.

... St. Xavier's College.

... L. M. S. Instn. Bhowanipore.

.. Hooghly College.

Ditto

... L M. S. Instn. Bhowanipore.

... Kishnaghur College.

... Queen s College, Benares.

... St. John's College, Agra.

... Delhi College.

... Pupil Teacher, Hooghly Normal School.

... Hooghly College.

Ditto

... Agra College.

... Kishnaghur College.

... Dacca College.

... Cathedral Mission College.

... Presidency College.

... L M. S. Instn. Bhowanipore.

... Presidency College.

... Calcutta Free Church Instn.

... Hooghly College.

... L. M. S. Instn. Bhowanipore.

... Dacca College.

... Presidency College.

... Ditto

... Calcutta Free Church Instn.

.. Queen's College, Colombo.

# DUFF SCHOLARS.

#### 1868.

Mitra, Sáradácharan, Majumdár, Chandramohan, O'Sullivan, E. Chattopádhyáy, Aghornáth,

. Bámeswar,

Presidency College. ••• Kishnaghur College.

St. Xavier's College.

Free Church Institution. •••

# ENTRANCE EXAMINATION.

#### 1866.

#### FIRST DIVISION.

# In Alphabetical order.

Lahore Govt. College, School. ... Ali, Wajed, Calcutta Free Church Instn. Bandyopádhyáy, Kedárnáth, .. Ooterparah School. ( Lakhináráyan, ... Dacca Collegiate School. Basák, Govindachandra, Ditto Rasamay, Colootollah Branch School. Basu, Buaykisan, Howrah School. Isánchandra, ... Metropolitan Institution. Jogeschandra, . ... General Assembly's Instn. Priyanáth, Kishnighin Coll. School. Bhattachárya, Jogendranáth, ... Calcutta Free Churchelinstn. Rámnáth, General Assembly's Instn. Sasibhushan, **3**.. Sanskrit College. Sivnáth, La Martimere College. Bremner, A G. Ditto Chattopádyháy, Amritalál, Calcutta Free Church Instn. Annodacharan, ... Bhagulporo School. Atalvihári. ... Ooterparah School. Kasiswar, Barrackpore School. Táraknáth, ... Hindu School. Trailakyanáth, ... Andul School. Chaudhuri, Apurbakrisha, ... Hindu School. Gyánchandra, ... General Assembly's Instn. Dás, Bhairavchandra, Hindu School. .. Nandalál. Salkes A. School.

Pál, Bihárilál,

Pratap, Shio,

Pandít, Joálánáth,

Datta, Aparnácha	ran,		Howrah School.	
" Baláichánd	l,	Colootollah Branch School		
" Surendrak	isan,	Ditto		
De, Bhaváni Sanl	car,		Calcutta Free Church Instn.	
" Sahadev,		•••	Hooghly Collegiate School.	
Deefholts, R. F.		•••	St. Xavier's College.	
De Noronha, D. I	F.		Dacca Collegiate School.	
Dhar, Asutosh,			Hindu School.	
Didárám,		•••	Mooltan Government School.	
Ghosh, Avinasch	andra,	•••	Hindu School.	
" Birajkisán	,	•••	Chinsurah Free Church Instn.	
" Jogendran		•••	Hindu School.	
" Rádháram	an,		Dacca Collegiate School.	
" Rámsákhá	,		Khanakool Kishnaghur A. S.	
		•••	School-	
Ghoshál Saratku	már,	•••	Hindu School.	
Gupta, Kunjavih	ari,	•••	Colootollah Branch School.	
Harvoy, C.		•••	Doveton College.	
Hogan, C. P.		•••	Private Student.	
Jayesinghe, E.		•••	Queen's College, Colombo.	
Khán, Baidyaná	th,	•••	Bhagulpore School.	
Kheár, Abul,			Calcutta Mudrissa.	
Láhuri, Priyanát	h,	•••	Bauleah School.	
McMillan, C.		•••	St. Paul's School.	
Mallik, Lalitmol	an,	•	Hindu School.	
Mitra, Rájendra	chandra,	•••	Colootollah Branch School.	
" Srináth,		•••	Hindu School.	
,, Surondr	-	•••		
Mukhopádhyáy,	Adhanáth,	•••	General Assembly's Instn.	
,,	Bihárilál,	•••		
,,	Jaygopal,	•••	,	
**	Káliprasanna,	•••	•	
,,	Párvaticharan,	•••		
Náth, Harihar,		•••	Patna Collegiate School.	
Obeyesekere, S	. C.	•••	St. Thomas' College, Colombo.	

Cossipore Aided School.

Metropolitan Institution.

Patna Collegiate School. .

Chán, Kázim,	Colingah Branch School.
	Delhi Govt. Collegiate School.
"	Hindu School.
D Justini dana Dore	Ditto.
Lahuri, Jogendrauáth,	Cossipore Aided School.
Lál, Channi,	Queen's College, Benares.
" Chandan,	Beilly College.
" Mahan,	Umritsur Coll. School.
" Sivtahal,	Queen's College, Benaros.
Mattra, Rámdía,	Ooterparah School.
Maitri, Benimádhav,	Calcutta Free Church Instn.
77 1 1	Bauleah School.
• • • • • • • • • • • • • • • • • • • •	Berhampore Collegiato School.
Majumdar Harischandra,	D Candont
" Srináth,	O. H. H Callage
Mallik, Bankaviliárí,	IIl. Culcoal
" Bitarilál,	II. De Calleriote School
" Bipinvili of,	(1) 1 Mana (Hamah Ington
" Bipinyihárí,	n to a condent
,, Jogendranáth,	
"Ramupendra,	Berhampore Collegiate School.
Mitra, Atulchandra,	Hoozhly Branch School.
,, Bipinviliácí,	Ditto.
" Lakhichandra,	Pogose School.
,, Pramathanáth,	Hooghly Collegiato School.
"Rájkri-lina,	Queen's College, Bonares.
" Syamácharan,	Patna Collegiate School.
" Umeschandra,	Burranugger Hindu School.
Mukhopádhyay, Aghornáth,	Goberdangah School,
" Akhilehandra,	
" Amwikácharat	•
" Aviuschandra	·
" Chandramoha	
", Dinanáth,	Ilsoba Mondly A. School.
" Durgapada,	Salkea Aided School.
"Gnánendranát	
" Harischandra	
,, Hemchandra,	
", Jadunáth,	South Baharoo School.

Mukhopádhyáy, Jogendranáth,	•••	Barrackpore School.
" Kálípada,	***	Bally Seminary.
", Kisarılál,	•••	Jonye Training School.
", Kisarimohan,	•••	Hindu School.
,, Matilál,	•••	Chinsurah Hindu School.
" Pramadánáth,		Jessore School.
" Priyanáth,	•••	Colootollah Branch School.
", Rádhánáth,	•••	Jonye Training School.
" Rámchandra,	•••	Oriental Seminary.
,, Rámlál,	•••	Calcutta College.
" Sáradáprasád,	•••	Burdwan Moharaja's School.
" Tejchandra,	•••	Queen's College, Benares.
" Umácharan,	•••	Baraset School.
Nág, Gurudayál,	•••	Pogose School.
Neugi, Chandranáth,	•••	Hooghly Branch School.
,, Chandicharan,	•••	Hundu School.
" Umeschandra,		Chundernugger Night School.
Nundy, A.	•••	Canning College, Lucknow.
Ohlmus, J. A.	•••	St. Thomas' College, Colombo.
Pa', Amritalel,	•••	Hooghly Collegiate School.
,, Biliárilál,	•••	General Assembly's Inst.
,, Indramohán,	•••	Bangla Bazar School.
"Jánakíuáth,	•••	Goberdangha School.
., Sunáth,	•••	Kishnaghur Collegiate School.
., Tarmicharan,		Calcutta Training Instn.
Páht, Khetramohan,	••	Tallygunge School.
., Syámácharan,	•••	Berhampore Collegiate School.
Patnáyak, Antarjami,		Cuttack School.
Pereira, S. H.	•••	St. Thomas' College, Colombo
Prasad, Baldeo,	•••	Hume's High School, Etawah.
" Mahesha,	***	Queen's College, Benares.
Rahim, Abdur,	•••	Joynarain's College.
Ruhman, Azizar,	•••	Kishnaghur Coll. School.
Ray, Abhay charan,	•••	Mymensing School.
" Aghorchandra,	•••	Chinsurah Free Church Instn.
,, Balabhadra,	•••	Cuttack School.
" Chandramohan,		Burdwan Moharaja's School.
"Devkánta,	•••	Kishnaghur A. V. School.

Ráy, Dwendranáth,

.. Hemchandra,

, Jánakínáth,

.. Karalicharan,

"Kártikchandra,

" Khagendranáth,

,, Khetramohan,

.. Kuladakinkar,

"Kuladánandan,

.. Maheschandra,

"Nilámwar,

. Prasannakumár,

.. Purnachandra,

,, Rajanikánta,

,, Sasibhushan,

. Surendradev.

. Umásankar,

Raychaudhuri, Adharchandra,

,, Annadaprasád,

. Narendranáth.

Sáhá, Janakínáth,

Sahibram,

Sandel, Jozendranáth,

Sarker, Bámácharan,

Binadlál,

,, Gopálchandra,

.. Nilmaní.

, Rájendran**á**th,

Sarun, Rám,

Sarvádhikári, Anantakumár,

Sen. Abhayácharan,

.. Abhayá'umár,

"Girgásankar,

.. Govinchandia,

" Haridás,

... Colootollah Branch School.

... Kishnaghur Collegiate School.

... Khajah Abdul Gunny's Free School.

... Myapore School.

... Satragachee Evening School.

... Hindu School.

... Cathedral Mission College.

... Dacca Collegiate School.

... Pubna School,

... Bancoorah School.

... Hooghly Collegiate School.,

... Bagnan School.

... Pogose School.

... Khajah Abdul Gunny's Free School.

.. Furreedpore School.

.. Hooghly Branch School,

... L. M. S. Instn. Bhowaniporo.

... Private Student.

... Calcutta Training Instn.

... Cossipore Aide I School.

... Hooghly Collegiate School.

... Victoria College, Agra.

... Howrah School.

... Hooghly Collegiate School.

... Paikparah School,

... Govindpore School.

.. Burranugger Hindu School.

... Colootollah Branch School.

. Umritsur Collegiate School.

.. Sanskrit College.

Burrisaul School.

.. Jessore School.

Pogose School.

.. General Assembly's Instn.

.. Khajah Abdul Gunny's Free School. Sen, Isánchandra,

"Kálíprasanna,

Káminíkumár.

Krishnadás,

Navinchandra,

" Byámkisar,

" Syámlál,

Sengupta, Chandrasikhar,

Set, Mihirlál,

" Rádhánáth,

.. Rajanílál,

Shircore, J. C.

Sing, Mahendranáráyan,

Vernieux, E. O.

Calcutta Training Instn.

Kallyghat Hindu Academy.

Pogose School.

Burdwan Moharaja's School.

Khajah Abdul Gunny's Free ••• School.

Mymensiug School.

Calcutta Training Academy.

Maldah School.

Agurparah C. M. S. Instn.

Oriental Seminary.

Calcutta Model School.

Medical College.

Hooghly Branch School. ...

Doveton College.

#### 1867.

#### FIRST DIVISION.

# In Alphabetical Order.

Arunasalem, Ponnambalem, Bandyopádhyáya, Bihárílál,

Queen's College, Colombo.

Hare School.

Dacca Collegiate School. Dwárikánáth. Khetramohan, ...

General Assembly's Instn. Hare School.

Lálgopál, Rasikmohan,

Dacca Collegiate School.

Srishchandra, Hare School.

Barckley, W. C. G.

Basu, Baikanthanáth,

Baradáprasád,

Bholánáth,

Dharmadás.

Manmathkumár,

Paresnáth,

Rajendrachandra,

La Martiniere College.

Hare School.

Howrah School.

Ditto

Honghly Collegiate School.

Kishnaghur Collegiate School.

Hare School. ...

General Assembly's Instn.

#### UNDER GRADUATES.

Basu, Tárinícharan,		Hare School.
Beg, Khodádád,	***	Canning College, Lucknow.
Bhuttáchúrya, Bámácháran,	***	Jonye Training School.
" Náráyanchandra,		Serampore College
Brown, W. D'Routh,		Bishop's School, Simla.
Chattopádhyáy, Aghornáth,		Dacea Collegiato School.
,, Ganeschandra,		Patna Normal School.
" Rákháldás,		Ootterparah School, V
" Sajanikánta,		Kıshnaghur Collegiate School
Chumpa, John,		Free Church Instn. Nagpore.
Carrie, F.	•••	St. Xavier's College.
Das, Bamandás,		Haro School.
, Bipinvihárí,		Hmdu School.
"Khiradehandra,	•••	Ditto.
Data, Akhaykumár,		Seal's Free College,
., Braj inolian,	•••	Calcutta Free Church Instn.
" Brindabanchandra,		Hooghly Collegiate School.
" Sasibhushan,	• • •	Dacca Collegiate School.
" Stinath,		Ditto
De, Brajendranáth,		Canning College, Lucknow.
, Devendranath,		Hare School,
, fadyiháti,	•••	Oriental Seminary.
Elston, J.		Bishop's School Simla.
Ghosh, Amwikácharan,		Dace & Collegiate School.
,, Harankrishna,	•••	Hindu School.
" Pitúmwar,		Balasore School.
, Priyanath,		Hooghly Collegiate School.
Ghoshál"Tarapad i,		Cossipore Aided School.
Gupta, Párwatis inkar,		H iro School.
Haldar, Kisardal,	,,,	Hooghly Collegiate School.
., Bár idakánta,		Ducca Collegiato School.
Hatten, J. J.		Doveton College.
Hosein, Jaifer, I.		Acra College.
Kar, Guischandra,	•••	Metropolitan Instn.
Kumar, Purmachandra,	•	Hare School.
Lal, Bihari,		Queen's College, Benares.
, (mrsaian,	•••	Barcilly College.
Majamalar, Kailáschandra,	•••	Metropolian Instn.

Majumdár, Rámdurlav,	•••	Mymensing School.
Mallik, Kunjalál,		Hindu School.
" Mohendranáth,	•••	Ditto
"Sádhucharan,	***	Howrah School.
McNair, G. B.	•••	La Martiniere College.
Mitra, Apurwakrishna,	•••	General Assembly's Instn.
, Biswambhar,	•••	Hındu School.
" Jogendranáth, (Senior),	•••	Hare School.
" Rásvihárí,	•••	Beerbhoom School.
Mountain, W. J.	•••	Bengal Academy.
Moses, C. O.	•••	St. Xavier's College.
Mukhopádhyáy, Akhaykumár,		Kishnaghur Collegiate School.
" Gopálchandra,	,	Hindu School.
" Harakálí,	•••	Agurparah C. M. Instn.
,, Hai d is,	•••	Hare School.
"Kálínath,	•••	Kıslmaghur A, V. School.
,, Kalipada,	•	Hooghly Collegiate School.
"Kántichandra,		Haro School.
" Kasiswar,	•••	Serampore College.
" Syámákumad,	•••	Hindu School.
" Thakurdás,	•••	Burrisal Aided School.
" Upendrachan	dra,	Dacca College.
Munsi, Amritalál,	•••	Ootterparah School, Y
Náth, Kási,		Delhi Collegiate School,
Pál, Jadunath,	•••	Ootterparah School. (
Parsád, Ajodhyá,	•••	Queen's College, Benares.
" Gangá,	•••	Bareilly College.
,, Jwala,	•••	Queen's College, Benares.
😠 Kási,	•••	Delhi Collegiate School.
Rum, Toté,	•••	Agra College,
Ráy, Khiradehandra,	•••	Hindu School.
"Rojanínáth,	•••	Dacca Collegiato School.
Sábá, Jogendranáth,	•••	Calcutta Free Church Instn.
Samal, Harischandra,	•••	Bogra School.
" Sasimohan,	•••	Beauleah School.
Sarkar, Baikanthachandra,	***	Dacca Collegiate School.
" Mohendranáth,	•••	Metropolitan Instn.
", Trudakyanáth,	***	L. M. S. Instn. Bhowanipore.

Sen, Amwikácharan, ... Dacca Collegiate School.

" Battakrishna, ... Haro School.

" Durgacharan, ... Burrisaul School.

" Sasibhushan, ... General Assembly's Instn.

#### SECOND DIVISION.

# In Alphabetical Order.

Beerbhoom School. Acharya, Isánchandra, ... Chinsurah Free Church Instn. Adlinkari, Gopalchandra, Sing treonebadla School. Adhya, Amwikácharan, Barcelly College. Ahmed, Faiz, ... Howrah School. Má, Abdul, Free Church Instn Nagpore. Alı, Hıdar, Anthomisz, Edwin Rowland, Queen's College, Colombo. Beaulcah School. Bázchi, Annadáprasád, Julinnder Mission School. Bak-h, Azız, ... St. John's College, Agra. Wázir, Barrackpore School. Bakat, Bunkavilifif, L. M. S. Instn. Bhowanipore. Bandyopádhyáy, Amulyachandra, .. Hsobamondly Aided School. Baradáprasád, Chinsurah Free Church Instn. Brajalsl. ... Patna Normal School, Chandrakumár, ... Doveton College. Dinanath. Beerbhoom School. Giríschandra, Hemchandra. Hare School. . ,, Patna Normal School. Hiralál. ... ٠,, Midnapore School, Javrám, Baraset School. Kedárnáth, Konnuger School. Kisarilál, ,, Hooghly Collegiate School. Krishnauáth, ,, Mahendranáráyan, Berhampero Collegiate School. Chingurah Free Church Instn. Navinchandra, ... Narsingchandra, .. Santipore English School, Scelpore Aided School. Niváranchandra.... Nilratan, Agurparah, C. M. S. Instn. Pitámwar. Metropolitan Institution. .,

Bandyopádhyáy, Saratcha	ndra, Serampore College,	
" Sivehandi		
,, Sitánáth,	Nundon Brother's Academy.	
" Tárinidás	Kishnaghur Collegiate School	ol.
, Umeschar	dra, Ilsobamondlye Aided School	l
Basák, Mahimchandra,	General Assembly's Instn.	
Basu, Akhayki ishna,	Hindu School.	
" Amwikacharan,	, Noral Aided School,	
" Atulchandra,	Hare School.	
"Binadviharí,	Ranaghat School.	
" Bhutnáth,	Gupinathpore School.	
" Gopalchandra,	Hindu School.	
" Kailáschandra,	Ditto.	
" Kaliprasanna,	Pogose School.	
"Kesavkumár,	Kishnaghur Collegiate Scho	ol.
" Lálmohan,	Pogose School.	
" Rámchandra,	Chinsurah Free Church Inst	tu.
,, Ramánáth,	Hare School.	
" Rameschandra,	Khajah Abdool Gunny's Fre	0
	School,	
", Rásvihári,	Burrisal School.	
" Sivehandra,	Della Collegiate School.	
" Srínivás,	Seal's Free College.	
Baptist, G. A	Patna Collegiate School.	
Bhar, Havulal,	Hooghly Collegiate School.	
Bhuttachárya, Akhaykum		1.
" Bhuvanmol		
" Iswarchane		
" Jagabandh	u, Mahanad Free Church Miss	sion
	School.	
" Prasannak	•	
" Rámchand		
" Rasvihárí,	Burdwan Maharajás School.	
Biswás, Syámtáran,	General Assembly's Instn.	
" Siddheswar,	Hooghly Collegiate School.	
Bryson, A. II.	Bishop's School, Simla.	
Chakravarti, Bholánáth,	Ootterparah School, 🤾	
" Harináth,	Boroe Seminary.	

Chakravati	, Saratchandra,	•••	Agurparah C. M. S. Instn.
33	Syámácharan,	•••	Seal's Free College.
,,	Tárákumár,	•••	Sanscrit College.
,,	Tejchandra,	•••	General Assembly's Instn.
Chandra, I	Iaricharan,	•••	Ditto.
Chattopádl	ıyáy, Bám∗charan,	•••	St Xavier's College.
,,	Bishanchandra,	•••	Rungpore School,
,,	Durgádás,	•••	Hare School.
,,	Ganeschandra,	•••	General Assembly's Instn.
,,	Giríschaudra,	•••	Tallygunge Ad. Mission School.
,,	Jogendrachandr	a,	Cutwa School.
,,	Jogendranáth,	•••	General Assembly's Instn.
,,	Jagavandu,	•••	Chinsurah Free Church Instn.
,,	Kálí-ankar,		Rungpore School.
,,	Kártikch indra,	•••	Bancoorah School.
11	Kártikchandra,	•••	Patna Normal School.
1)	Khetranáth,	•••	Konnugger School.
**	Mahendralul,	•••	Howrah School.
,,	Nírmalchandra,		Chinsurah Free Church Instn.
,,	Sasíbhushan,		Hooghly Collegiate School.
11	Srínáth,	•••	Nizamut School.
Chaudhuri	, Akrınchandra,	•••	Chittagong School.
"	Banwárilal,	•••	Beerbhoom School.
,,	Brajanath,	•••	General Assembly's Instn.
"	Madhusudan,	•••	Kishnaghur A. V. School,
*,	Matnál,	•••	General Assembly's Instn.
,,	Umeschandra,	•••	Bancoorah School.
Christian,		••	Doveton College.
Cuylenbur	g, Charles Theodor	ro	
Van,		•••	Queen's College, Colombo.
	wanchandra,	•••	Dacea Collegiate School.
	mbhar,	•••	Calcutta Training Academy.
	passanna,	•••	Daoca Collegette School.
" Dwar	·	• • •	Barcilly College.
	handra,	•••	Beerbhoom School,
,, (iosta	· ·	•••	Hooghly Branch School.
•	rchandra,	•••	Di. to.
,, Ishwai	rchandra,	•••	General Assembly's Instn.

#### Dás, Kálimohan,

- " Luchman,
- " Mádhu,
- . Mahendralál,
- , Narsing,
- " Narsing,
- .. Parmeswari,
- " Rajkumar,

#### . Ramákánta,

- " Smatchandra, I.
- " Svámchánd,
- " Súnyanáráyan,

#### Dán, Bihárilál,

" Gopálkrishna,

#### Datta, Amwikacharan,

- .. Bhavání,
- .. Chadranáth,
- " Dwánkánáth,
- . Gopálchandra,
- .. Mahendralal,
- " Megnáth,
- ,, Pránkrishna,
- ; Satyacharan,
- .. Upendiachandra,

#### De, Chumlal,

- ., Jogendranáth,
- "Kedarnáth,
- " Ramanáth,
- " Sasibhushan,

Dev, Gopendrakrishna,

#### Dayál, Bageswari,

- .. Din.
  - , Parmeswari,

Din, Fakhral,

D'Silva, A.

Dubern, G.

Durand, V. C.

- ... Pogose School.
- ... Dehli Collegiate School.
- ... Agra College.
- ... Chinsurah Free Church Instn.
- ... Hume's High School, Etawah.
- ... Peshawar Mission School.
- ... Fyzabad School.
- ... Khajah Abdool Gunny's Free School.
- ... Gowhatty School.
- ... Chittagong School.
- ... Calcutta Free Church Instn.
- ... Hindu School.
- ... General Assembly's Instn.
  - . Rungpore School.
- ... Jessore School.
- ... Barcilly College.
- ... General Assembly's Instn.
- ... Barripore Aided School.
- ... L. M S. Instn. Bhowanipore.
- ... Kishnaghur Collegiate School.
- ... Hare School.
- ... Singarkone Badla School.
- ... Midnapore School.
- ... Cuttack School.
- ... Chinsurah Free Church Instn.
  - ... Hindu School.
- ... Canning College, Lucknow.
- ... Malnapore School.
- ... Hooghly Branch School.
- ... Handu School.
- ... Joynarain's College, Bonares.
  - .. Delhi Collegiate School.
  - ... Queen's College Benarcs.
- ... Joynamin's College, Benares.
  - ... St. Xavier's College,
- ... Ditto.
- Ditto.

Fros	C	n
ros	u.	υ.

Gángopádhyáy, Apurvakumár,

Haramohan,

Ghosh, Aswinikumár,

Brajendrachandra,

Chandranáth,

Gopálchandra,

Heinchandra,

Jadumani,

Kánáilál,

Lálvihári,

Madhusudan,

Mahimchandra.

Mathuránath,

Priyanáth,

Rájkisan,

Sasibhushan,

Sasibhushan,

Satkari,

Umeschandra,

Upendranath,

tro; al, Madan,

Guha, Austhvandhu,

Prasannakumár,

Gupta, Chandrakumár,

Chandranáráyan,

Dwarikánáth,

I-ánchandra,

Jaharilál,

Krishnachandra,

Pratápehandra,

Rajnárávan,

Házrá, Amwikácharan,

Ibraham, Syed,

Iman , In. lad,

Jeremy, Lazarus,

LaMartiniere College.

Metropolitan Instn.

Patna Normal School.

Chittagong School.

Kandee A. S. School.

Calcutta Training Academy. ...

Midnapore School. ...

Ootterparah School.

Cuttack School. ...

General Assembly's Instn. ...

Hooghly Branch School.

Serampore Collegiat School.

Bogra School.

Metropolitan Instn. ...

General Assembly's Instn. ...

Haro School.

Calcutta Free Church Instn.

Sechnore Aided School.

Serampore College.

Hooghly Branch School. . . .

Metropolitan Instn.

Della Collegiate School. ...

Mymensing School.

Gregory's School. ...

Ootterparah School.

Gya School. ...

> Khajah Abdool Gunny's Free School.

Pogose School.

Beerbhoom School.

Khajah Abdool Gunny's Free

School.

Chinsurah Free Church Instn.

Gya School.

L. M. S. Instn. Bhowanipore. ...

Patna Collegiate School.

Bhagulpore School. ...

Teacher.

Kar, Syámácharan, Keyt, Charles Edward,

Khetri, Devakinandan,

Koár, Rájendralál,

" Sasíbhushan,

Kuch, Navakrishna,

Kundu, Chandrakumár,

" Nandalál, Láhá, Rámchandra,

" Rishikes,

Lál, Bánkai,

"Bihárí,

" Bihárí,

"Giridhári,

" Jai,

" Lachman,

" Sádhi,

" Sohan,

Lambert, G.

Latif, Abdul,

Lynch, W.

Majumdár, Bindivihári,

" 🛀 Bipmyībári,

,, Govindanáth,

,, Gurudas,

., Kamalchandra,

Mal, Jahari,

Málik, Abdul,

Mallik, Baistavcharan,

Malla, Nikunjavihári, Mandal, Pránkrishna,

Mandal, Prankiishn.

Mendes, T A.

Mirza, Mahamad, A.

Missri, Biharilal,

Mitra, Anuadápr: sá l,

Avináschandra,

,, Bagavaticharan,

... Dacca Collegiate School.

... Queen's College, Colombo.

... Queen's College, Benares.

.. Goopeenáthpore School.

... Taltollah Preparatory School.

... Berhampore Collegiate School.

... Howrah School.

... Metropolitan Instn.

Hindu School.

Ditto.

... Hume's High School, Etawah.

... Bareilly College.

... Lahore Zillah School.

... Delhi Collegiate School.

... Bareilly College.

... Patna Collegiate School.

... Hume's High School, Etawah.

... Bareilly College.

... St. Xavier's College.

... Calcutta Mudressa.

... St. Xavier's College.

... General Assembly's Instn.

... Hare School.

... Beauleah School.

... Queen's School, Chittagong.

... Shumboonath's School, Chat more.

... St Stephen's College, Delhi.

... Calcutta Mudressa.

... Hooghly Collegiate School.

... Cutwa School.

... Bancoorah School.

... Bengal Academy.

... Teacher.

... Burdwan Mahárája's School.

... Hare School.

... L. M. S. Instn. : Burdwan.

... Oriental Semulary.

Mitra, Bihárila	il,	•••	Myapore School.
" Gopálchandra,		•••	Hooghly Collegiate School.
" Gnanendranáth,		•••	Calcutta Free Church Instn.
" Hirálál,		•••	General Assembly's Instn.
" Jogendranáth, (Junior,)			Hare School.
" Jogendranáth,			Horinavi A. S. School.
" Jogesháchaudra,			Khanacool Kishnaghur A. S.
			School,
" Kedáres	hwar,	•••	Beauleah School.
"Kedárnáth,			Midnaporo School.
" Matilál,		•••	Kishnaghur Collegiato School.
Mitra, Púrnachandra,			General Assombly's Instn.
" Sasíbhu	ishan,	•••	Hare School.
" Umesch	andra,	•••	Beauleah School.
Moore, G. F.		•••	Bishop's School, Simla.
Mukhopádhyáy	, Aghorchandra,		Bhastara School.
,,	Asutosh,	•••	Beauleah School.
*	Bholánáth,		Calcutta Free Church Instn.
,1	Biseswar,		Ditto.
,,	Chandrakánta,		Burrisaul School.
11	Chandrakumár,		Howrah School.
,,	Dakhináranjan,		Paikparah School.
,,	Dúrgadís,	•••	Berhampore Collegiate School.
,,	Dwárikánáth,		Balasoro School.
,,	Giríndranáth,		Kishnaghur Collegiate School.
19	Gopálchandra,	••	Taltollah Preparatory School.
**	Háránchandra,	•••	Howrah School.
,,	Hemchandra,	•••	Bignapara School.
••	Jogeswar,	•••	Taltollah Preparatory School.
**	Kálidás,		Agurparah C. M. S. Instn.
,,	Kálíkánanda,	•••	Howrah School.
**	Kedárnáth,	•••	Metropolitan Instn.
••	Khetramohan,		General Assembly's Instn.
11	Khetranáth,	***	Kishnaghur A. V. School.
31	Mahendranáth,	•••	Burdwan Maharaja's School.
21	Nanigopál,	•••	Hooghly Branch School.
19	Piárilál,	•••	Hare School.
n	Rámlál,	•••	Culna Free Church Br. School,
~ 4			

Beersingha A. S. School. Mukhopádhyáy, Rámpada, Hooghly Branch School. Súrjyakumár, Srigopál, Ditto. ••• Monghyr School. Saratchandra, ٠, Umeschandra, Sanscrit College. Hindu School. Nág, Haricharan, " Kedárnáth, Bhastara School. ... " Krishnalál, Dacca Collegiate School. Pogose School. Náhá, Anangamohan, Hooghly Branch School. Naudi, Byáchárám, ••• E. Canning College, Lucknow. Hooghly Collegiate School. Kártikchandra, ... Canning College, Lucknow. Narayan, Hriday, Har. Amere School, ... ,, Lachmi, Pandit, Canning College, Lucknow. Beerbhoom School. Náth, Bhola, Lálá, Fyzabad School. " Gopi, Canning College, Lucknow. Harrhar, Pandit, ... Hume's High School, Etawah. Kási, ... Lahore Zillah School. Puth, Pandit, ... Hume's High School, Etawah. Raghu, Dmagepore School. Neugi, Rajanikanta, ... St. Xavier's College. Otto, R ... Oriental Seminary. Pál. Bholánáth, " Chandramádhav, Baugla Bazar School. " Haricharan, Calcutta Training Academy ... St. Thomas' College, Colombo. Panabokke, Tikiri Banda, Patna Normal School. Parminand, Patranavish, Báneswar, Mymensing School. Bally Seminary. Páthak, Lálvihárí, ••• Queen's College, Colombo. Pereira, Charles Stephen, ... Canning College, Lucknow. Prashad, Madhu, Lala, . . . St. John's College, Agra. Rám, Calcutta Mudrissa, Rahman, Faizur, ... Ditto. Fazlur Khán, ... Beerbhoom School. Rajak, Bankavihárí,

...

Rakhit, Govindakisar,

Ram, Atmi,

Dacca Collegiate School.

Umritsar Collegiate School.

Ram, Savá,

Ranchandra, Kásináth. D.

Ráo, Basant,

Rauf, Mohámmad Abdur,

Ráy, Bangachandra,

,, Bhujangabhushan,

" Chandranáth,

.. Devendranáráyan,

" Durgásundar,

.. Gangádás,

. Giríschandra,

. Gnánendrakumár,

... Harendranáráyan,

, Jagatchandra,

" Nibaranchandra,

" Navinchandra,

" Parmeshwar,

" Púrnachandra,

.. Purnachandra,

, Saradáprasanna,

" Saty ácharan,

" Smiyakanta,

, Sy imáprasanna,

" I daychandra,

Richards J. H.

Sindel, Tlákurdás,

Santra, Chandicharan, Sarvadlakuri, Upendrakumár,

Sen, Anandachandra,

" Bihárilál,

, Dars indhu,

" Govindalál,

.. Grandas,

.. Hauschandra,

" Kanailal,

. Makeschandra,

.. Prasannakumár,

.. Rameschaudra,

.. Agra College.

. Free Church Instn. Nagpore.

... Bareilly College.

... Calcutta Mudrissa.

... Banglabarar School,

.. Berhampore Collegiate School.

.. Konnugur School.

... Hindu School.

.. Pubna School.

.. Burrisaul School.

... Beerbhoom School.

.. Metropolitan Instn.

... Kishnaghur Collegiate School.

... Berhampore Collegiate School.

.. Ditto.

... Beerbhoom School.

... Kishnaghur A. V. School.

... Kishnaghur Collegiato School.

... Pogose School.

... Kishnaghur Collegiato School.

... Surscrit College.

... Kishnaghur A.V. School.

... Gossydurgapore A. V. School.

.. Mymensing School.

... Doveton College.

... Queen's College, Benares.

. Howrah School, [School,

. Khanakul Kishnaghur A. S.

.. Pogoso School. [School.

. Khajah Abdool Gunny's Free

... Pogose School, ... Hare School,

... Mymensing School.

... Cuttack School.

... Hare School.

.. Beauleah School.

... Pogose School.

.. Rungpore School.

Sen, Ratneswar,

,, Syámácharan,

" Tárácharan,

,, Tárinícharan,

" Umánáth,

Sankar, Kirpá,

" Kirpá,

Sarkár, Bámandás,

" Binadvihárí,

" Giríschandra,

., Haricharan.

" Jádavkrishna,

" Jadunáth,

" Kálíkinkar,

" Krishnadhan,

" Tarinícharan,

Sarmé, Luchmichandra,

Sengupta, Kálídás,

Senewiratne, Alexander DeAlwis,...

Shá, Bipinvihárí,

Sháin, Kedárnáth,

Simmons, II. L.

Sing, Gekulvihárí,

"· Ishwarprasad,

" Jáwáhir**,** 

,, Kásináth,

" Mahendranáth,

" Matilál,

,, Navagopál,

" Nīkunjavihár**í,** 

" Omiáo,

" Sáligiám,

,, Sasibhushan,

Solomons, Philip Francis,

Súr, Hemchandra,

Syámjus,

Thákur, Navinmádhav,

Whyte, Robert,

... Pogose School.

... Burrisaul School.

... Queen's School, Chittagong.

... Intally Institution.

... Dacca Collegiate School.

... Victoria College, Agra.

... Canning College, Lucknow.

... Bhagulpore School.

... Hooghly Collegiate School.

... Calcutta Free Church Instn.

... Chinsurah Free Church Instn

... Shambazar Preparatory School.

... Patna Collegiate School.

... Jerat School.

... Serampore College.

... Pubna School.

... Gowhatty School.

... Beerbhoom School.

St. Thomas' College, Colombo.

, Seramporo College,

... Agui para C. M. S. Instn.

.. St. Xavier's College.

... Beerbhoom School.

.. Have School,

... Queen's College, Benares.

Ditto.

... Howrah School.

... Metropolitan Instn.

... Calcutta Free Church Instn.

... General Assembly's Instn.

... Delhi Collegiate School,

... Patna Collegiate School.

. . Hooghly Branch School.

... Queen's College, Colombo.

... General Assembly's Instn.

... St Stephen's College, Deihi.

.. Calcutta Training Academy.

.. Calcutta Free Church Instn.

## THIRD DIVISION.

# In $\Lambda lphabetical\ Order.$

Ah, Hosen,	•••	Calcutta Mudrissa.
, Karámat,	• • •	Chittagong School.
, Shákáwat,		Khajah Abdool Gunny's Free
,,	•••	School.
Amed, Siddik,		Calcutt i Mudrissa.
" Támiz uddín,		Jehanabad School
B´,chi, Jogeswar,		Salken Aided School.
" Lolitmohan,	•••	Bauleah School.
· ,, Taraknáth,		Gregory's School.
Bepai, Basantalál,		Kandre A. S. School.
Diegevind,		Queen's College, Benares.
Boale, Palipana Tekire,		St Thomas' College, Colombo.
Ban lyopádhyáy, Chandrakumár,		Har · School.
" Chandrakum u,		Hetumpore School.
Devendranáth,		Metropolitan Instituti m.
., Gopálchandra,		Kishnighur A. V. School.
Haricharan,	••	Chin surah Free Church Insta.
, Harm ito,		Kislanghur Collegiate School.
, Kumavil ára		Teacher.
, Navidarshia,		Heoghly Collegiate School.
., Rojkumír,		Chaisurah Free Church Insta.
"Rámchan lia,		Sarun School.
,, Raedál,		Burackpore School.
Rámsaron,		K. lighat Hindu Academy.
,, Suschan aa,		Quern's College, Benates.
Barál, Púrnachand,		Hindu School.
basak Jogeshei endra,		Mea cal Colloge.
" Praumt' anath,		Hindu School.
" Radhikur chan,		Pogose School,
Basu, Avn áschandra,		Met op han Institution.
, Danwardal,		Beidwor C. M. S. Instn.
" Chandrakumár,		Neral School.
. Pin iaya <sup>1</sup> ,	• • •	Gard As mbly's Instn.
,, Guanadásankar,	•••	Kishinghur A. V. School.

#### Basu, Gopálchandra,

- .. Khetramohan,
- ., Maheschandra,
- " Nilmádhav,
  - , Navadipchandra,
- " Pravod,
- ., Sivkrishna,
- " Siddheswar,
- " Tárinícharan,

#### Beliál, Hırálál,

Bhávrá, Gangárám,

Bhattáchárya, Durgásankar,

- " Jadunáth,
- " Kálícharan,
- Kedárnáth,
- ,, Nilmádhav,
- "Rájkumír,
- Rámnáth,
  - Sripati,

#### Biswás, Jadunáth,

- .. Kártikáya,
- , Nityagopál,

#### Campagnac, A. G.

.Chakravarti, Bidhubhushan,

- " Bishnucharar,
- " Chandranáth,
- " Giríschandra,
- " Haricharan,
- " Mahendranáth,
- " Priyanáth,
- , Rajaníkánt,
- " Rasikranjan,
  - Sasibhusha**n,**
- " Sasikumár,

#### Chánd, Nimai,

Chandra, Brnjendrakumár, Govinlál,

- ... Free Church Mission School Sonatigri.
- ... Calcutta Training Academy.
- ... Jehanabad School.
- ... Juggutbulubpore School.
- ... Dushghura School.
- ... Kalighat Hindu Academy.
- ... Teacher.
- ... Hooghly Branch School.
- ... Chittagong School.
- ... Kulingram School.
- ... Lahore Zillah School.
- ... Joynarain's College, Benares.
- ... Salkea Aided School.
- ... Canning College, Lucknow.
- ... Serampore College.
- ... Nizamut School, Moorshedabad.
- ... Konnugur School.
- ... Sanscrit College.
  - ... Berhampore Collegiate School.
- ... Burdwan Preparatory School.
- ... Jehanabad School.
- ... General Assembly's Instn.
- ... Doveton College.
- ... Kishnaghur A. V. School.
- ... Burrisal School.
- ... Queen's College, Benares.
- ... Chittagong School.
- ... Mymensing School.
- ... Chinsurah Free Church Instn.
- ... Horinavi A. S. School.
- ... Pogose School.
- ... Tagoria Ad. School.
- ... Metropolitan Instn.
- ... Pogose School.
- ... Aimere School.
- ... General Assembly's Instn.
- ... Hindu School.

Chandra,	Khetra,		Lahore Zillah School.
Chaudhur	i, Chandicharan,	•••	Bancoorah School.
3)	Kálidás,	•••	Free Church Instn. Nagporo.
))	Kálidás,	•••	Burdwan C. M. S. Instn.
,,	Kedárnáth,	•••	Metropolitan Instn.
,,	Khíradnáth,	•••	General Assembly's Instn.
,,	Sasíbhushan,	•••	Burdwan Preparatory School.
Chattopád	lhyáy, Anukulchandre	a,	Indian Free School.
,,	Benimádhav,	•••	Santipore English School.
"	Binadvihári,	•••	Khaja Abdool Gunny's Free
		•••	School.
,,	Giríschandra,	•••	General Assembly's Instn.
"	Giríschandra,	•••	Gya School.
n	Jogeswar,	•••	Bancoorah School.
,,	Jagannáth,	•••	Agui parah C. M. S. Instn.
,,	Kálídás,	•••	Kishnaghur Collegiato School.
"	Kálínáth,	•••	Burrisal School.
13	Kálípada,	***	Agurparah C. M. S Instn.
13	Kedárnáth,	•••	Kishnaghur Collegiate School.
,,	Navakumár,		Boroe Seminary.
,,	Nilmádhav,		South Baharoo School.
,,	Nimáichandra,	•••	General Assembly's Instv.
"	Ramánáth,	•••	Tallygunge Mission School.
,,	Sáradaprasád,	•••	Agurparah C. M. S. Institution.
"	Tárinícharan,	•••	Kandeo A. S. School.
,,	Umeschandra,	•••	Burdwan Maharajá's School.
Christian,	Α.	•••	Dacca Collegiate School.
Corbet, R.		•••	St. Xavior's College.
Dás, Amw	ikácharan,	•••	Sanscrit College.
, Atra		•••	Rawul Pindeo Mission School.
	alkrishna,	•••	Barrackpore School.
	adchandra,	•••	Chittagong School.
	anmohan,	•••	Mecrahya School at Putteah.
" Nanc		•••	Haro School.
••	atikumár,	•••	Burrisaul School,
	charan,	•••	Sylhet Mission School.
	iumár,	•••	Dacca Collegiate School.
,, Purb	achandra,	••	Konnuger School.

Ghatak, Asutosh,

Dás, Purusottam,	••	St. John's College, Agra.
,, Rámkamal,	•••	Queen's School, Chittagong.
"Rámkrishna,		Santipore English School.
"Sivchandra,	•••	Cossipore School.
,, Sivkrishna,	•••	General Assembly's Institution
"Sríkrishna,	••	Bansbaria Free Church Mission
		School.
" Trailakyanáth,	•••	Maldah School.
Datta, Adyánáth,	•••	Sylhet Mission School.
"Bhaváníkánta,	•••	Teacher.
" Bhagavanprasád,	•••	Cuttack School.
" Bipinvihárí,	•••	Chinsurah Free Church Instn.
Dás, Durgádás,	•••	Cutwa School.
" Dwárikánáth,	•••	L. M. S. Instn. Bhowanipore.
" Jánakínéth,	•••	Tagoria A. V. School.
"Kailáschandra,	•••	Mymensing School.
" Mangovinda,	•••	Chuckdigay School.
" Nalinákhya,	•••	Beerbhoom School.
,, Pránktishna,	•••	General Assembly's Instr
"Ratneswar,	•••	Burdwan Preparatory School.
" Sasibhushan,	•••	Santiporo English School.
David, J.	•••	L. M. S. Instn. Mirzapore.
De, Bhút náth,	•••	Hindu School.
,; Ganeschandra,	•••	Serampore College.
,, Mathuránáth,	•••	Sylhet Mission School
DeLivera, Ernest Simon Edwin,		Queen's College, Colombo.
Dev, Amwikácharan,	•••	Jessore School.
" Haranáth,	•••	Pogoso School.
" Jagatchandra,	•••	Sylhet, Mission School,
" Jogeschandra,	•••	Queen's College, Benares.
Dhar, Gokulkrishua,	•••	Teacher,
Dayál, Bageswari,		Queen's College, Benares.
Dissannycko, David Alexander,	•••	Queen's College, Colombo.
Fernando, Solomon,	•••	Ditto
Gangoj ádhyáy, Avináschandra,	•••	Syedpore Ad. School.
" Gopálchandra,	•••	South Baharoo School.
", Sasikumar,	•••	Gregory's School.

... Chinsurah Free Church Instn.

	n
thereb.	Dinanáth,

Jagatballabh,

.. Kálíprasanna,

.. Khetramohan,

" Púrnachandra,

" Priyanáth,

", Rájkrishna,

" Saratchandra (Senior),

" Tárinícharan,

" Umeschandra,

Gopál, Nand,

Goswámi, Brajalál,

" Srínáth, Guha, Basantakumár,

Gupta, Ghanesyáni,

" Prasannakumár,

,, Táráprasanna dás,

Háldár, Narasingha,

• ,, Nandalál,

Hosen, Jáfár II.

.. Mahammed Avdul,

" Moshaheb,

Indra, Sámcharan,

Jha, Surjyamaní,

Kar, Sáradámohun,

Karmakár, Dwárskanath,

Khan, A'yaz,

" Mogal,

" Navagopál,

Khetri, Chhunnálal, I.

" Gogiumal,

Kisan, Rádhá,

Kumár, Bipinkrishna,

Jogendranáth,

" Rajendranáth,

Lackersteen, A.

Láhiri, Maheudranáth,

Lál, Anandi,

... Baraset School.

... Burdwan Preparatory School.

... Hare School,

... Cawnpore School.

... L. M. S. Instn. Bhowanipore.

... Barrackpore School.

... Useful Arts School.

.. General Assembly's Instn.

.. Bhagulpore School.

... Sulkea Aided School.

... Goojrat School.

... Bullagur School.

... Borhampore Collegiate School.

... Burrisal School.

... Patna Collegiate School.

... Pogose School.

... Intally Institution.

... L. M. S. Instn. Bhowanipore.

... General Assembly's Institution.

... Agra College.

... Berhampore Collegiate School.

... Queen's College, Benares.

... Santipore English School.

... Bhagulporo School.

... Sylhet Mission School.

... Nizamut School.

. St. John's College, Agra,

.. Goojrat School.

... Kishnaghur Collegiato School.

... Queen's College, Benares.

Ditto

... Agra Collego.

...

.. Ootterparah School. Y

Intally Institution.

... Sanscrit College.

... St. Xavier's College.

... Burannuger Hindu School.

... Ajmere School. .

•••

Lal, Bhuan,

" Chhunna, II.

" Dhunna,

" Kisari,

"Kunjvihári,

" Mithun,

" Mohan,

"Rám,

"Rambhaja,

" Syám,

Mahommed, Ali,

Majumdar, Annadáprasád,

" Baikanthanáth,

" Girindranárayan,

, Kailáschandra,

, Prabodhchandra,

Mal, Ságar,

Mallık, Devendranátu,

Jogendrachandra,

" Kánáilál,

" Sibhari,

Meiselbach, R. L. B.

Minos, P. J.

Mir, Syed,

Misri, Hitlál,

Mitra, Amwikácharan,

. Anádicharan,

" Brindavanchandra,

.. Jogendranáth,

. Prándháran,

" Priyanáth,

" Rájrákhál,

., Sasibhushan,

. Sasibhushan,

.. Trigunácharan.

" Umoschandra,

" Umoschandra

Moreino, B.

. Patna Normal School.

... Queen's College, Benares.

... Maharaja's School, Jeypore.

... Delhi Collegiate School.

Ditto

... Bareilly College.

... Agra College.

... St. John's College, Agra.

... Patna Collegiate School.

... Agra College.

... Fyzabad School.

... Chinsurah Free Church Instn.

... Pubna School.

.. Howrah School.

... General Assembly's Instn.

... Hare School.

... Jullunder Mission School.

... Metropolitan Institution.

... Chinsurah Hindu School.

... Chinsurah Free Church Instn.

... Mozufferpore School.

... Doveton Collego.

... Dacca Collegiate School.

.. Jullunder Mission School.

... Lahore Mission School.

... Howrah School.

... Patna Normal School.

... Metropolitan Institution.

... Jonyo Training School.

... General Assembly's Instn.

... Normal School.

... Hindu School.

... Calcutta Free Church Instn.

... Jessore School.

... Calcutta Free Church Instn.

... Khanacool Kishnaghur A. S. School.

... Chittagong School.

Mukhopádhyáy,	Akhaykumár, II.	110	Jonye Training School.
>>	•	•••	Hindu School.
"	Bhutnáth,	•••	Hurish School, Sorsunna.
,,	Baradáprasád,	•••	Jugguthbulubpore School.
"	Bholánáth,	•••	Berhampore Collegiate School.
3)	Devendranáth,	•••	Kishnaghur A. V. School.
,,	Jáhnavicharan,		Jugguthbulubpore School.
) <i>1</i>	Jogendrachandra		Calcutta Training Academy.
1.	Jogendranáth,		Jugguthbulubpore School.
11	Jagadiswar,		Purulia School.
11	Káiláschandra,		Barrackpore School.
"	Kálıkrishna,		Chinsurah Free Church Instn.
,,	Karunásindhu,		Burdwan Preparatory School.
,,	Kedárnáth,	•••	Umballa Mission School.
"	Kirtivás,	•••	Gungadosspore School.
"	Mahendralál,		Bullagur School.
,,	Mahendranáth,	•••	L. M. S. Instn. Bhowanipore.
"			Free Church Instn. Nagpore.
,,	Nivaranchandra,		Chinsurah Free Church Instn.
1)	Nilmani,	•••	Oriental Seminary.
21	Rádhikáprasád,		Chinsurah Free Church Instn.
,,	Rajanikanta,		Jugguthbulubpore School.
73	Rájkumár,		Howrah School.
,,	Rákhaldás,		Oriental Seminary.
23	Rakháldás,		Jonya Training School.
••	Sáradácharan,		Jugguthbulubpore School.
11	Trigunánáth,		Chinsurah Hindu School,
Munshi, Akhay	kumér Datta,		Metropolitan Instn.
Marphy, T.			St. Xavier's College,
Nág, Náráyanel	andra,		General Assembly's Instn.
" Rádháram	iau,		Hindu School.
" Sitánáth,			Banglabazar School.
Nágar, Makund	aráin,	•••	Queen's College, Benares.
Nandi, Chandre	máth,	<b></b>	Jugguthbulubpore School.
"Rákháld	ú5,	•••	Hooghly Branch School,
Náráyan, Inda:	r, Pandit,	•••	Agra College.
,, biv,		•••	Hume's High School, Etawah-
Narsing,		•••	Joynarain's College, Benarcs.

Náth, Bholánáth,

Jagan, Pandit.

Jwála.

Kedárnáth. "

Sambhu,

Svám,

Neugy, Sáradáprasád,

Nolan, Johan Talbot,

Osmond, J. P.

Pál, Kálíprasanna,

" Rámlál,

" Táraknáth,

Pálit, Umeschandra,

Pandit, Krishnáráo.

Rámbhán,

Parámánik, Bipinvihári,

Prasád, Jánki,

Joti, ٠.

Látta.

Sivagovinda,

Thákur.

Price, J. R. G.

Ram, Bhagat,

Daulat,

Kánshi,

Kirpa,

Moluk,

Moni.

Tulsi.

Ráy, Amwikacharan,

Asutosh,

Benimádhav,

Dakhinapada,

Fakirchandra,

Govindachandra,

Gaurlál.

Harasunder,

Haridás.

Allyghur School.

Agra College. ...

St. John's College, Agra.

Canning College, Lucknow.

Teacher.

Delhi Collegiate School.

Maldah School. •••

St. Thomas' College, Colombo.

St. John's College, Agra.

Noakhally School.

Coomercolly School.

Barrackpore School.

Bancoorah School,

Saugor School.

Ditto

Santipore English School.

Fyzabad School. • •

St. Stephen's College, Delhi.

Bareilly College.

Queen's College, Benares.

Ditto.

St. Paul's School, Darjeeling.

C. M. School, Umritsar,

Gooirat School.

Goojranwalla School.

Umritsar Collegiato School.

Labore Mission School.

Victoria College, Agra.

Bareilly Collego.

...

Kishnaghur A. V. School. •••

Hooghly Collegiate School,

Berhamporo Collegiate School

Hooghly Branch School.

Burdwan Maharaja's School.

Victoria College, Agra.

Bauleah School.

Pubna School.

Burdwan Maharajá's School.

Ráy,	Harinár	iyan,
------	---------	-------

" Kálíprasanna,

" Kedárnáth,

" Krishnanáráyan,

" Nilratan,

" Párvatícharan,

" Purnachandra,

.. Prasannanáth,

" Rasiklál,

., Sivchandra,

" Syámmádhav,

Ráychaudhuri, Rájendrakumár,

" Durgákanta,

,, Jogendrakumár,

" Rajanímohan,

Rebello, P. T.

Sahá, Kulícharan,

" Pránnáth,

Sáhay, Bajrangi,

Sáhzádá.

Sándel, Anandgopál,

Sarkår, Hemchandra,

" Krishnalal,

" Srínáth,

" Syámácharan,

., Umeschandra,

Sen, Chandra, Kısar,

" Isánchandra,

" Isánchandra,

.. Jaharlál,

" Jogeshwar,

" Krishnaprasanna,

"Korunáchandra,

.. Navinchandra.

" Piárimohan,

" Prasannakumár,

. Prasannakumár,

... Metropolitan Instn.

... Khaja Abdool Gunny's Free School.

. Calcutta Free Church Instn.

... Gregory's School.

.. Burrisaul School.

... Howrah School.

... Burdwan Preparatory School.

... Burrisaul School.

... Beerbhoom School.

... Midnapore Local Mission School

... Kishnaghur Collegiate School.

... Barripore Aided School.

... Jessore School.

... Barripore Aided School.

... Kishnaghur Collegiate. School.

... Bengal Academy.

.. Serampore College.

... Calcutta Free Church Instn.

... Bhagulpore School.

... Lahore Mission School.

... Santipore English School.

... Calcutta-Free Church I stn.

... Berhampore Collegiate School.

... Nizamut School.

. Intally Institution.

... Burdwan Maháraja's School.

... Pogose School.

... Ditto.

... Sylhet Mission School.

... Hindu School.

... Pogose School.

... Jessore School.

... Khaja Abdool Gunny's Free Sch.

... Seal's Free College

... Khaja Abdool Gunny's Free Sch.

... Mymensing School.

.. Tagoria School.

Sen, Purnachandra,

" Ranajay,

" Ráicharan,

Bíl, Giríschandra,

" Mahendranáth,

Sing, Bháo,

" Bhoray,

" Harnám,

" Jithá,

" Liná,

, Purusottam,

" Prem,

" Farmeswár,

.. Rádhikaprasád,

,, Sundar,

. Upendrachandra,

Sinha, Baldeo,

Snái, Krishnachandra,

Som, Beninath,

Somdat.

Speldewinde, Francis Adolphus,

Tillekeratne, James Nicholas,

Urshud, Mahammad,

... General Assembly's Instn.

... Dinagepore School.

... Intally Institution.

... Khaja Abdool Gunny's Free Sch.

... Hooghly Collegiate School.

... C. M. School, Allahabad.

... Teacher.

... Rawul Pindee Mission School.

... Joynarain's College, Benares.

... Umritsur Collegiate School.

... Bhagulpore School.

... C. M. School, Umritsur.

... Sarun School,

... Kandi A. S. School.

... Rawul Pindeo Mission School.

... Bhastara School.

... Private Student.

... Hindu School.

... Jessore School.

Rewarce School,

St. Thomas' College, Colombo.

Queen's College, Colombo.

. Bhagulpore School.

### MEDICINE.

...

#### M. D.

Basu, Jagabandhu,

Carter, R. W.

De, Chandrakumár,

Sarkár, Mahendralál,

... 1863, Medical College.

... 1865, Assistant Surgeon, H. M. 82nd Regiment.

... 1862 Medical College.

.. 1863 Ditto

#### B. M.

Bandyopádhyáy, Jádavchandra, ... 1866 Medical College.

Bhattáchárya, Hemchandra, .. 1867 Ditto

Chattopadhyay, Syamucharan, ... 1867 Ditto

Datta, Kedárnáth,		1866 Me	edical College.
De, Nandolál,	•••	1867	Ditto
Ghosh, Chandramohan,	•••	1864	Ditto
Mukhopádhyáy, Gangáprasád,	***	1867	Ditto
Som, Dayálchandra,		1865	Ditto

## 1868.

## FIRST DIVISION.

Gupta, Kálípada,

... Medical College.

### SECOND DIVISION.

## In Alphabetical Order.

Ghosh, Fakirchandra,	•••	Medical College
Peters, C. T.		Ditto

## L. M. S.

Achárjya, Kámikhyánáth,	•••	1862	Medical College.
Bágchi, Abhaycharan,	••	1861	Ditto
Bandyopádhyáy, Harischandra,	•••	1861	Ditto
" Nakurchandra,	••	1867	Ditto
" Purnachandra,		1865	Ditto
" Rajkrishna,	••	1861	Ditto
Basu, Amritakrishna,	•••	1867	Ditto
"Benimádha <b>v</b> ,	••	1865	Ditto
,, Dharmadás,	•••	186l	Ditto
,, Dinanáth,	••	1864	Ditto
" Harimchan,		1865	Ditto
" Lakhináráyan,		1863	Ditto
" Priyanéth,	•••	1867	Ditto
" Upendrachandra,	••	1867	Ditto
Bháduri, Bihárílál,	••	1865	Ditto
" Tárinícharan,	••	1866	Ditto

Bhattáchárya, Nilmádhav,	••	1864	Medical College.
Chakravartí, Navinchandra,	••	1867	Ditto
Chambers, E. W.		1866	Ditto
Chattopádhyáy, Bámácharan,	•••	1865	Ditto
" Bhuvanmohan,	••	1861	Ditto
Govindachandra	<b>.</b> , .	1866	Ditto
. Kedárnáth.	••	1863	Ditto
" Rádhikáprasád,	••	1861	Ditto
Chaudhuri, Kapileswar,		1861	Ditto
", Nilmaní,		1867	Ditto
Crump. H. W.		1866	Ditto
Dás Adharchandra.	••	1863	Ditto
" Chunilál,	•	1866	Ditto
"Kálíkumár,		1866	Ditto
, Kesavchandra,		1867	Ditto
Datta. Giríschandra,	••	1865	Ditto
, Háránchandra,	••	1866	Ditto
Manahar,	••	1855	Ditto
" Manflal,	••	1862	Ditto
, Umeschandra,	••	1863	Ditto
De, Akhaykumár,	••	1865	Ditto
"Rámlál,	••	1865	Ditto
Dev. Gopálchandra,	••	1865	Ditto
Dhol, Nandalál,	••	1862	2 Ditto
Ghosh, Dayálkisan,	••	186	7 Ditto
" Dokari,	••	186	3 Ditto
,, Hirálál,	••	186	1 Ditto
,, Jádavkisan,	••	186	1 Ditto
" Jadunáth,	••	186	3 Ditto
" Krishnadhan,	••	186	1 Ditto
,, Mádhavchandra,	••	186	•
,, Nandalál,	••	186	
,, Párvaticharan,	••	186	
" Rámlál,	••	186	
", Trailakyanáth,	••	186	
Ghoshál, Káliprasanua,	••	180	
Gupta, Mahendranáth,	••	186	•
"Rámchandra,	••	186	6 Ditto

#### GRADUATES.

Gupta, Sambhuchandra,	••	1862	Medical College
Húldár, Káláchánd,	•••	1863	Ditto
Keyt, F.	••	1863	Ditto
Koch, E. L.	••	1862	Ditto
Kundu, Rájkumár,	••	1865	Ditto
Láhuri, Gopálchandra,	•••	1864	Ditto
" Syámácharan,	••	1865	Ditto
McReddie, G. D.	••	1861	Ditto
Mitra, Giríchandra,		1863	Ditto
" Giríschandra,	•••	1867	Ditto
"Kálikumár,	••	1862	Ditto
, Káliprasanna,	••	1861	Ditto
, Kásikinkar,	• •	1865	Ditto
" Navinchandra,	••	1861	Ditto
, Syámchandra,	•••	1866	Ditto
,, Umácharan,	•••	1861	Ditto
, Umeschandra,		1866	Ditto
Mukhopádhyáy, Agharnáth,	•••	1866	Ditto
" Bhagavatíchars	n	1863	Ditto
" Dwárikánáth,		1866	Ditto
,, Jadubhushan,	••	1866	Ditto
,, Jadunáth,	••	1866	Ditto
Lálmádhav,	••	1866	. Ditto
", Rájkisar,	•••	1863	Ditto
", Syámácharan,	•••	1866	Ditto
Nandi, Nityánanda,	••	1862	Ditto
Pál, Janaranjan,	•••	1866	
Ráy, Durgadás,	••	1861	Ditto
" Gopálchandra,	••	1865	
,, Haranáth,	•••	1867	
" Navagopál,	• •	1865	
" Táráprasanna,	•••	1867	
" Umeschandra,	•••	1867	
Sádhu, Ramanchandra,	••	1863	
Sarkár, Bhuvanmohan,	•••	1861	
" Mahendralál,	••	1861	
,, Sasibhushan,	•••	1867	
Sen, Baláichandra,	••	1863	
Sing, Surjyaniráyan,	••	1865	Ditto

#### 1868.

#### FIRST DIVISION.

Bandyopádhyáy, Rájmohan, .. Medical College.

#### SECOND DIVISION. ' .

## In Alphabetical Order.

Basu, Rádhánáth,	•••	Medical College
De, Gopálchandra,	•••	Ditto
Dásgupta, Gurudayál,	•••	Ditto
Gangopádhyáy, Knandalál,		Ditto
Harischandra,		Ditto
Gupta, Navinchandra,	•••	Ditto
Majumdár, Syámácharan,	•	Ditto
Pálit, Bireswar,		Ditto
Sen, Kisarimohan,		Ditto
Ullá, Adit,	••	Ditto

## UNDER GRADUATES.

First M. B. Examination.

1867.

#### SECOND DIVISION.

Chakravarti, Purnachandra, ... Medical College.

1868.

SECOND DIVISION.

Gupta, Bankavihárí,

... Medical College.

## FIRST L. M. S. EXAMINATION.

1867.

SECOND DIVISION.

In Alphabetical Order.

Bandyopádhysy, Gopálchandra, ... Medical College.

Harináráyan, Ditto

Ditto Basak, Amulyaratan,

Basu, Mahendralál,	1	Medical College.
" Sivchandra,	<b>:</b>	Ditto
" Umeschandra,	• •	Ditto
Chakravarti, Rámlál,	••	Ditto
Dov, Amritulál,	••	Ditto
Gangopádhyáy, Táraknáth,	•••	Ditto
Goswámi, Gopálchandra,	••	Ditto
Gupta, Madhusudan,	••	Ditto
Mallik, Syámlál,	•••	Ditto
Mitra, Jagabandhu,	•••	Ditto
,, Priyamvarnáth,	•••	Ditto
Ray, Taraprasanna, II.	•••	· Ditto
Sen, Upendranáth,	•	Ditto
Sikdár, Srínáth,	•••	Ditto

## 1868.

## UNDER THE NEW REGULATIONS.

## In Alphabetical Order.

Basu, Jadunáth,	•••	Medical College
" Khargeswar,	•••	Ditto
Chauhuri, Kaliprasanna,	•••	Ditto
Datta, Krishnalál,		Ditto
Gupta, Ramkálí,	•••	Ditto
Ráy, Mahimchandra,	•••	Ditto

## SCHOLARSHIPS.

At Second M. B. Ezamination, Rs. 60 per month, tenable for two years.

#### IN MIDWIFERY.

Chattopádhyáy, Syámácharan,	•••	1867	Medical College.
Gunta Kálinada!		1868	Ditto

At Second L. M. S. Examination, Rs. 40 per month, tenable for two years.

#### IN MIDWIFERY.

Sarkár, Mahendralál,		1861	Medical College.
Nandi, Nityánanda,	**	1862	■ Ditto

#### IN SURGERY.

Bandyopádkyáy, Rájkrishna,		1861	Medical College.
Koch, E. L.	•••	1862	Ditto
Keyt, F.		1863	Ditto
Ghosh, Chandramohan,	•••	1864	Ditto
Ráy, Gopálchandra,	• ••	1865	Ditto
Chattopádhyáy, Govindachan	dra,	1866	Ditto
Gupta, Mahendranáth,	•••	1867	Ditto

#### IN MEDICINE.

Sarkár, Mahendralál,	•••	1861	Medical College.
Nandi, Nityananda,	•••	1862	Ditto
Háldár, Kalachúnd,	••	1863	Ditto
Mitre, Kásikinkar,	••	1865	Ditto
Datta, Háránchandra,		1866	Ditto
Rúy, Táráprasanna,	••	1867	Ditto
Bandyopádhyáy, Rájmohan,	•••	1868	Ditto

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IN DESCRIPTIVE AND SURGICAL ANATOMY.

Chattopadhyay, Syamacharan, ... 1865 Modical College.

Ray, Isanchandra, ... 1866 Ditto.

# IN MATERIA MEDICA AND PHARMACEUTICAL CHEMISTRY.

Peters, C. T. ... 1866 Medical College.

#### IN BOTANY.

Gupta, Kálípada,

... 1866 Medical College.

At First L. M. S. Examination, Rs. 16 per month, tenable for two years.

#### IN DESCRIPTIVE AND SURGICAL ANATOMY.

Bandyopádhyáy, Rájkrishna,	•••	1858	Medical College.
Bandernaike, A. W. D.		1859	Ditto
Ghosh, Chandramohan,	•••	1862	Ditto
De, Akhaykumár,		1863	Ditto
Chattopádhyáy, Govindachand	lra,	1864	Ditto

#### IN CHEMISTRY.

Mitra, Navinchandra,		1858	Medical College
Koch, E. L.		1859	Ditto
Rudra, Rádháraman,	•••	1860	Dtto
Som, Dayálchandra,		1862	Ditto
Pál, Janaranjan,	•••	1863	· Ditto
Datta, Háránchandra,	•••	1861	Ditto
Bandyopádhyáy, Rájmohan,	•••	1866	Ditto

#### IN MATERIA MEDICA.

McReddie, G. D.		1858	Medical College.
Achárya, Kámikhyanáth,		1859	Ditto
Háldár, Kalachánd,	•••	1860	Ditto
Háldár, Kalachánd, Basu, Benimádhav,		1862	Ditto
Bandyopádhyáy, Jádavchandra,	••	1863	Ditto

## SCHOLARSHIPS.

# IN BOTANY.

Sarkár, Mahendralál,	111	1858	Medical College.
Nandi, Nityananda,	111	1859	Ditto
Carbery, Joseph,	111	1860	Ditto
Datta, Kedárnáth,	111	1863	Ditto
Basu, Priyanáth	144	1865	Ditto

# IN PHYSIOLOGY AND COMPARATIVE ANATOMY.

Mitra, Matilál,	***	1861	Medical College.
Ráy, Táráprasanna,	111	1865	Ditto
Gangopádhyáy, Harischandra,	111	1866	Ditto

## VII.

## EXAMINATION PAPERS.

Entrance Examination.

1867.

## ENGLISH POETRY.

Examiners.— { Mr. Parry, Mr. Bruce.

O Edwin! while thy heart is yet sincere,
 Th' assaults of discontent and doubt repel:
 Nor be thy generous indignation check'd,
 Nor check'd the tender tear to misery given:
 From guilt's contagious power shall that protect,
 This soften and refine the soul for Heaven.
 But dreadful is their doom, whom doubt has driven
 To censure fate, and pious hope forego:
 Like yonder blasted boughs by lightning riven,
 Perfection, beauty, life, they never know,
 But frown on all that pass, a monument of woe.
 Paraphrase the above; parse the words in italics.

- 2. (a) Blest be the day I'scaped the wrangling crew. From Pyrrho's maze, and Epicurus' sty.
  - (b) A ast, though long by penury controll'd,
    And solitude, her soul his graces 'gan unfold.

- (c) The sophist's rope of cobweb he shall twine; Mone o'er the schoolman's peevish page.
- (d) They wheel askance. They thrid the flying maze.
- (e) Gothic days: Gothic lyre.

Explain the above; parse the words in italics.

- 3. Enumerate Beattie's works: What is the aim of 'The Minstrel?' Which element predominates in it, the descriptive or the narrative?
  - 4. (a) He quits his cell; the pilgrim staff he bore. And fixed the scallop in his hat before.
    - (b) Yet still the kindness, from a thirst of praise, Prov'd the vain flourish of expensive ease.
    - (c) His hopes no more a certain prospect boast, And all the tenour of his soul is lost.
    - (d) The passage o'er was nice to find.
    - (e) Eager wine; dappled morn.

Explain the above: and analyze (b).

5. The applause of listening senates to command. 'The threats of pain and ruin to despise,

Their lot forbad: ---

The struggling pangs of conscious truth to hide, To quench the blushes of ingenuous shame, Or heap the shrine of Luxury and Pride

With incense kindled at the Muse's flame.

Give the same sense of the above passage: and parse the words in italics.

VI. Explain the following:

Dirges due; storied urn; unlettered muse; Village-Hampden.

Give the proper construction of the phrase 'Full many a gem.'

- (a) Classify the figures of speech. Distinguish between syncope and apocope; metaphor and metonymy.
  - (b) Scan the following, and point out the figures of speech:—

Let not ambition mock their useful toil,

Their homely joys, and destiny obscure.

The cottage shut the door.

- 8. (c) Give the metres of Gray's Elegy and The Hermit.
- 8. Give the meanings and derivations of the following:—enthusiast; romantie; melancholy; ambition sylvan; parterres; precincts.
- 9. Write a short account of Parnell. Give concisely the doctrines taught, and the precept enjoined in 'The Hermit.'

## ENGLISH PROSE.

Examiners.— { MR. J. Wilson, MR. C. R. Cooke, B. A.

- 1. Explain clearly the sense of the following passages:—
  - (a) It gave an exaggerated colouring to his views and descriptions, that inevitably led to a reaction in the minds of such as embarked their all on the splendid dreams of a fairy land, which they were never to realise.

- (b) The best teachers are those who can seem to forget what they know full well: who work out results, which have become axioms in their minds, with all the interest of a beginner, and with footsteps no longer than his.
- (c) For hope, an architect above rules, can build, in reverse, a pyramid upon a point.
- (d) After reaching that place, no one was proof against this influence.
- (c) A well-fancied coat is done in a twelve-month, and cannot continue to propagate,
  as the fashion, that form according to which it was made.
- 2. Explain the meanings of the following words, and name the language from which each is derived:—Procrastination, admiral, martyr, cordial, churlish, technical, egotism.
- 3. Point out the idea imparted by each of the following prefixes to the word to which it may be joined:—Un, be, pre, inter, syn, dis, meta, se.

Give examples.

4. What do you mean by the *conjugation* of a verb? How many conjugations are there in English? Distinguish between them, and give examples of each.

Parse the words printed in italies in the following sentences:—

- (a) He lives a life of pleasure.
- (b) I live near the city.
- (c) He is far from wishing you barm.
- (d) Wishing to avoid him, I hurried away.

5. Define the terms subject and predicate.

Analyse the following sentence:-

When you have arrived at your decision, you have to consider how you shall convey it.

Distinguish between simple, compound, and complex sentences.

- 6. What is an *idiom?* Point out and explain the idioms in the following sentences:—
- (a) The late voyage of Columbus struck into a directly opposite track.
- (b) The argument may turn out to be a very sound one.
  - (c) You must enter into their ignorance.
- (d) The general character of the pattern will run through all the drawings; the most singular and odd will be those which are most wide of it.
- (e) Even their own pretensions of being always in the right will only bring the instance more home to them.
- 7. "I will assume the undertaking," said she," for my own crown of Castile, and am ready to pawn my jewels to defray the expenses of it, if the funds in the treasury shall be found inadequate."
- (a) Whether is this passage reported in the direct or the indirect form? How do you know?
  - (b) Change it into the other form.
- 8. (a) What did Columbus propose to accomplish when he set out on his great expedition? What circumstances led him to consider this as practicable?
  - (b) What is the limit of perpetual snow?
- (c) How can the height of a mountain be ascertained by barometrical measurement?
  - (d) What is a papal bull?

- 9. Correct the following sentences; and state what rule is violated in each:—
- (a) Gray's "Elegy" is a superior poem than Parnell's "Hermit."
  - (b) Let you and I the battle try.
- (c) The committee, who was appointed last session, report in favour of the bill.
- (d) Magnus, with four thousand of his supposed followers, were put to death.
- (e) Art thou the boy that hast committed this offence?
- (f) By the exercising our faculties they are improved.
- 10. Explain the different meanings of each of the following words, and form sentences to illustrate them:—Tense, fell, tender, mean, tear, mine.

## BENGALI POETRY.

Examiners.— { BABOO GOPAL CHUNDER BANERJEA. PUNDIT RAMGATI NYARATNA.

" কর্ম করি যেই জান ফলাকাজ্জী হয়।
বিণিকের মত সেই বাণিজ্ঞ করয়।।
ফললোডে ধর্ম করে লুক্ক বলি তারে।
লোডে প্রনঃ প্রনঃ পড়ে নরক হস্তরে।।
এইত সংসার সিল্ফু উদ্মিক্ত তায়।
হেলে তরে সাধু জন ধর্মের নৌকায়॥
ধর্ম কর্ম করি ফলাকাজ্জা দাহি করে।
ইপারেরে সমর্পিলে ভাবহেলে তরে।।

धर्म कल वाञ्चा कित धर्म शर्व करत। धर्म्म कित्रा निमा अधर्म आंतरत।। এই সব জনেরে পশুর মন্তে গণি। इथा जम्म याग्र जात्र भाग्र मिश्च यानि।। শিশু হয়ে धर्म आंत्रहर्म यहे जन। इरक्षत ভিতর তারে কর্বেম গণন।।"

- 1. Write the meaning of the first six lines in simple Bengali prose.
- 2. In what cases are 'দিফু' and 'উৰ্মি' in the fifth line, and 'নৌকায়' in the sixth?
- 3. In writing prose what word or words will you substitute for 'সমপিলে' in the eighth line, and what word is in the objective case to that verb?
- 4. To whom does the word 'sta' in the twelfth line refer, and what is the nominative to 'sata' in the last line?
  - 5. Name the metre (27:) of these lines and define it.
    - " এই পদ্মপ্রাশাক্ষী হচাক্তরাসিনী।
      পঞ্চাল রাজার কথা নাম ঘাজ্ঞসেনী॥
      ধার ক্রোধে শত ভাই কীচক মরিল।
      সৈরিজ্বীর বেশে তব গৃহেতে বঞ্চিল॥"
- 6. Explain in Bengali the meaning of the preceding lines with the allusions they contain.
- 7. In conformity to the text, when, by whom, and to whom were these lines spoken?
- 8. What is the meaning of the last word ' after ' and what is its nominative ?
  - '' মুমী সূদু সমীপে সবে করি ব্রাঞ্জি। বিশামিতে বলিছেন যত মহাবলী।।''

## " সস্তানবিহীন রাজা নিরানন্দমতি। তত দিনে তৈল এক কথা রূপবতী।।"

- 9. Correct the errors, if any, in the preceding lines.
- 10. Give the literal meaning of the following words, 'ছতাশন,' 'অবনীপ,' 'ক্লৱ,' 'সুধিষ্ঠির,' and ' 'নিরন্তর.'
- 11. Mention the prefixes, roots, and affixes of the following words, 'উত্তীৰ্,' 'জিনীযায়,' 'উন্তর্ণ,' 'বসুমতী,' and 'সম্বিত.'
- 12. In prose composition what words will be put for the following words used in poetry—
- '(अंग्राडि,' 'डिंदिनाम,' ' किनिटनक,' 'भ्याटिं,' 'रेडन,' and 'भीविंडि ?'
- 13. What persons are meant by the following words:— 'বৈরোচন,' 'লাধিসুভ,', প্রন্দর,' 'কৃষ্ণা,' 'সহসুলোচন,' and 'ধন-শ্বয়?'
- 14. Translate the following sentences into Bengali prose.
- 1. Virtue alone produces happiness.
  - 2.. Nothing is impossible to a strong will.
  - 3. Desultory study is of no avail.
  - 4. There is nothing dearer to us than our country.
- 5. History is an inexhaustible storehouse of example; and cases drawn from this source are frequently quoted in proof of general propositions. There is scarcely a virtue or vice incidental to human nature of which history does not furnish us with many examples.

#### BENGALI.

Examiners.— { REV. LAL BEHARI DE. BABOO BIPRO CHURN CHUCKERBUTTY.

- 1. Explain the following passage:-
- " অতএব কথনং আত্মশ্লাঘায় কথন বা জয়োলাসে ঠাহার হংপল প্রফুল হইত, তাহার চিন্তাকাশ সন্দেহ বা ভয় রূপ মেঘে কথনই মলিন হয় নাই। অপর তিনি সহোদর্দিগের ক্রিয়ার প্রতিভ ছণা প্রকাশ করিতেন আরে রবি করিণ কালে নিজ বাটা সম্বলিত উচ্চতর স্থানে দখায়মান হইয়া কীর্ত্তিন কামের মন্দিরে স্থিই নিক্ষেপ পূর্বক শ্লেঘোক্তি করিতেন কথন বা কাঞ্চনপ্রিয় অর্থের নিতান্ত বশীন্তত হওয়াতে তাহার প্রগাঢ় দাসক বর্ণনায় কৌত্রকাবিষ্ট হইতেন কিন্তু অবশেষে আপন স্কৃতশ্রেণীর প্রতি নেত্রপাত করিয়া এই বক্তৃতা করিতেন 'আমারও এক মন্দির আছে, তাহা প্রগাঢ় রূপে স্থলবদ্ধ হইয়াছে। আমারও ধন সম্পত্তি আছে কিন্তু তাহা নিরাপদ স্থানে সঞ্চিত রাখিয়াছি '।''
- 2. Give the roots of the words, সন্দেহ, নিক্ষেপ, বকু চা, উল্লাস, কণী জু চ and দৃ ফি.
- 3. Indicate the samasa of জায়োলাস, হংপদা কীর্ত্তিকাম, and কালনপ্রিয়
- 4. Explain the nature of তৎপুক্ষনমাদ, and mention its several forms, illustrating each by an example.
  - 5. Translate the following sentences into English:-
- "प्रिविष्ठ अरु बाद श्रवाकि इहेगा घात्रव्य हर्गवि स्थान करिया अरह उन अर्घ्य हर्ग नार्ट अनावन अ श्रम श्रीकाद स्वव क्रीवाय श्रम हरेगा विवीय बाद श्रम हरे सम्बद्ध समझद के क्रकी वाद श्रम सम्बद्ध सम्बद्ध

বিছরের নিকট রাখিয়া পত্নী ভাত প্রস্থাতর সহিত বনে
প্রস্থান করিলেন, তাঁহারদের যাত্রা কালীন হস্তিনা প্রেস্থ যাবদীয় লোক বিষাদে পরিপুণ হইল আর আবাল বন্ধ বনিতা
সকলে অন্তস্ত থেদ করিতে লাগিল। সর্ব জনেই মুধিপ্তিরের
মহান্মভব্ব দয়া ধর্ম ইল্লাদি গুন্গ্রামের নিমিন্তে অন্তর্নাগ ও
সমাদর করিত, তৎকালের লোকেরা ছাত্র ক্রীড়াকে সামাভ
দোষ মাত্র জ্ঞান করিত্র একারণ আপনার স্বাধীনতা ও প্রজাপ্রস্তের হিতাহিত ছাত্র ক্রীড়ার গল্পধীন করাতে মুধিপিরের
চরিত্রে যে দোষ স্কুর্শ হইয়াছিল কেই তাহা গণনা করিলেক
না ছর্মোবন ছলপুর্বক অক্ষে ক্তকার্থ ইইয়া যে হিণ্সা প্র
থলতা প্রকাশ করিয়াছিল তক্ষ্রতই মুধিপিরের ছর্গতি বিবেচনা করিয়া তাঁহার প্রতি নাগরিক লোকদের অধিক দয়ার
উদ্ভব হইল, অত্রথব কথিত আছে প্রত্যেক হাক্তি মুক্তকণ্ঠে
মুধিপিরের গুণাম্বাদ ও ছয়্যোধনের নিন্ধাবাদ করিয়াছিল।"

- 6. What is the general law for the formation of হিলেম্বণ?
- 7. Mention the circumstances under which the dental a is clauged into the cerebral a.
  - 8. Give a complete list of the prepositions or উপসর্গ.
- 9. Analyze every compound word in the following passage:—

"তাহারদের এই বান্ত সমাপ্ত না চইতে গ্রহের এক পার্পে যে দর্পণ ছিল তাহাতে অগ্রজের ছঙিপাত হইল এবং সেই মুকুর মথে কোন জন্সম স্থান্তির প্রতিভা প্রকাশ পাইতে লাগিল, পরন্ত গ্রহ মথে বস্তুতঃ সে স্থানির কোন চিক্ত ছিল না। দপণগত বিশ্ব অবলোকন করিয়া তিনি অন্ত জগণকে তদ্দ্দ্দ্দ্দ্দ্দ্দ্দ্র করিতে সক্ষেত্র করিলেন পরে তাহারদের মুখ স্থান হওয়াতে বোধ হইল যে উহাতে সকলেরি ছক্পাত হইয়া-ছিল। ঐ স্থান্তি এক ভছ প্রক্ষের আহারবং প্রতীয়্মান হইতে

লাগিল, তাহার রূপে কোন ভীষণত্ব ছিল না, কিন্তু তৎসন্মিকর্ষ মাত্রে মুকুর মঞ্জিত অভান্ত প্রতিবিদ্ধ সকলের রূপান্তর হইল। তিনি ফ্রর্ণ অচিত ফলকে পাদার্পণ করাতে তাহা তৎ-ক্ষণাৎ জর্জারীছত হইয়া গেল, এবং এক গলদন্ত নির্মাত মেজ তাহার পরিধেয় বসনাঞ্চল সংস্কর্মমাত্রে চুর্ণ হইল, অপর বাণিক্য দ্বেত্ব ও মণি মাণিক্যাদি সকল তাহার ছপ্রিপথে পতিত হইয়া তৎক্ষণাৎ নিপ্তুভ হইল।"

10. Write a short essay (in Bengali) on the life and writings of Kalidas.

#### LATIN POETRY.

## Examiner.—Mr. J. Sime, B. A.

- 1. Write down the genitive singular of Jupiter, fur, ebur, joeur, vas (a vessel) os (a bone), from (a branch), nir: and the accusative and ablative singular of vis, securis, restis, turris, puppis, rus, heros, classis.
- 2. Compare super, novus, senex, celer, dives; and translate into Latin:—Two hundred and forty-one soldiers were sent to ask for peace.
- 3. Give the perfect, first supine and infinitive of the following verbs, marking the conjugation and meaning of each —mico, caveo, neco, fundo, misceo, pinyo, tendo, vinco, caedo.
- 4. How do comitia, castra, litterae, partes, sales, differ in meaning from their singular forms? Mention any peculiarity in the declension of locus, jugerum, dies. Explain, with instances, the terms cognate and Greek accesatice.

5. Translate into English—Fast. Lib. II. 491—512.

Est locus; antiqui Capream dixere paludem; Forte tuis illic, Romule, jura dabas.

Sol fugit, et removent subcuntia nubila cœlum; Et gravis effusis decidit imber aquis.

Hinctonat, hincmissis abrumpitur ignibus æther.

Fit fuga: Rex patriis astra petebat equis.

Luctus crat, falsacque patres in crimine cædis;

Haesissetque *animis* forsitan illa fides; Sed Proculus Longa veniebat Julius Alba;

Lunaque fulgebat ; nec facis usus erat ;

Cum subito motu nubes crepuere sinistræ;
Rettulit ille gradus; hortueruntque comæ.

Pulcher, et humano major, trabeaque decorus, Romulus in media visus adesse via;

Et dixisse simul, "Prohibe lugere Quirites; Nec violent lacrymis numina nostra suis.

Thura ferant, placentque novum pia turba Quiti-Et patrias artes militiamque colant." [num.

Jussit; et in tenues oculis evanuit auras.

Convocat hic Patres; jussaque verba refert.

Templa deo fiunt; collis quoque dictus ab illo: Et referunt certi sacra paterna dies.

- 6. (a) Explain dies fastus, and give the etymology of fastus.
  - (b) Parse the words in Italies in the above passage.
  - (c) Where was the Palus Caprere?
  - (d) Explain—"falsacque Patres in crimine caedis,"—" major humano."
  - (e) To whom does hic, in "convocat hic Patres," refer?

- (t) When is jubeo followed by ut with the subjunctive?
- 7. Translate-
  - (a) "Sed mihi tam faciles unde, meosque deos?"
  - (b) "Dat vultum populo sublime sub Hercule victo."
  - (c) "Virum tunica tabe perire mea."
  - (d) "Ipsa comas pectar; galea caputille prematur?"
  - (e) "Quæ tantum lanas non sinat esse rudes."
  - (f) "Castris militet ille tuis."
- 8. Translate into English-Fast. Lib. I. 591-608.

Perlege dispositas generosa per atria ceras; Contigerunt nulli nomina tanta viro.

Africa victorem de se vocat: alter Isauras, Aut Cretum domitas testificatur opes.

Hune Numidæ faciunt, illum Messana superbum:
Ille Numantina traxit ab urbe notam.

Et mortem et nomen Druso Germania fecit:
Me miserum! virtus quam brevis illa fuit!

Si petat a victis, tot sumat nomina Cæsar, Quot numero gentes maximus orbis habet.

Ex uno quidam celebres, aut torquis adempte, Aut corvi titulos auxiliaris habent.

Magne, tuum nomen rerum mensura tuarum est; Sed qui te vicit, nomine major erat.

Nec gradus est ultra Fabios cognominis ullus; Illa domus meritis Maxima dicta suis.

Sed tamen humanis celebrantur honoribus omnes. Hic socium summo cum Jove nomen habet.

- 9.\* (a) Who was Germanicus?
  - (b) Explain the allusions in the lines beginning with Africa victorem and ending with Germania fecit.

- (c) Distinguish between corvus and cornix, dapes and epulae, and describe the aratrum.
- (d) Explain fully,—
  "Hujus et augurium dependet origine verbi,
  Et quodeunque sua Jupiter auget ope."
- (c) Arrange the following words in an elegiac couplet;

Toro affixusque jaceo, vinctus ceu compede; Languida lumina victa cesserunt malis.

(0). What do you know about Jason, Menclaus, Mencriades, Evander, Pater Armipotens, Nestor, Quirinus.?

## LATIN PROSE.

## Examiner.—REV. L. VEYS.

Namque ipsorum naves ad hunc modum factæ armatæque erant. Carinæ aliquanto planiores, quam nostrarum navium, quo facilius vada ac decessum æstûs excipere possent : proræ admodum erectæ, atque item puppes ad magnitudinem fluctuum tempestatumque accommodatæ : naves totæ factæ ex robore, ad quamvis vim et contumeliam perferendam : transtra pedalibus in latitudinem trabibus confixa clavis ferreis, digiti pollicis crassitudine : anchoræ, pro funibus, ferreis catenis revinctæ: pelles pro velis, alutæque tenuiter confectæ, sive propter lini inopiam atque ejus usûs inscientiam, sive eo, quod est magis verisimile, quod tantas tempestates deani tantosque impetus ventorum sustineri, ac tanta onera navium regi velis non satis commode, arbitrabantur.

- 1. Translate the above into English.
- 2. Give the principal parts of vinco, vincio, vivo, vado, vescor, and veho.
- 3. Why does Caesar use quo, and not ut, before facilius nada; and why aliquanto, not aliquantum, before planiores?
  - 4. Explain the idiom: ad quanvis vim perferendam.
- 5. Give the nominative and genitive singular of trabibus robore, vada, tota, and latitudinem.
- 6. What is the derivation of confectie, tempesta'es, inscientium, verisimile, and impetus.
  - 7. Decline vim.
  - 8. Translate:—

Ad hee cognoscenda, priusquam periculum faceret, idoneum esse arbitratus Caium Volusenum, eum navi longa præmittit. Huic mandat, uti, exploratis omnibus rebus, ad se quamprimum revertatur: ip-e cum omnibus copiis in Morinos proficiscitur, quod inde erat brevissimus in Britanniam transjectus.

- 9. Compare idoneum, longa, and brevissimus.
- 10. Explain the accusative Caium Voluscuum, and the ablative rebus.
- 11. Conjugate the present indicative, active and passive of faceret.
  - 12. Parse newi and proficiscitur.
- 13. Explain the genitive Rome and the ablative Athenis in the following: Rome consules, Athenis Archontes quotannis creabantur.
- 14. Explain the genitive consilii and the subjunctive capiam in nescio quid consilii capiam.
  - 15. Translate into Latin:-

It is the part of a wise man to govern his tongue. Flattery (assentatio) can hurt nobody but him whom it pleases. Nobody can serve two masters. Cæsar resolved to take Caius Volusenus with him into Britain. Alexander and Cæsar were very great commanders.

# SANSCRIT.

Examiner.—Baboo Krishna Comul Bhutttacharjee, B. A.

१ । इतिषे दीर्घसनस्य सा चेदानीं प्रचेतमः ।
 भुजङ्गपि दितदारं पातास्तमिधितिष्ठति ॥

चाव दीर्घमनस्य इति भुजानपि चितद्वारम् इति च एतत् पदद्वयं केमाभित्रायेण नियेशितम्। पिचित इत्यस्य प्रकृतिप्रत्ययादिकं ब्रूचि।

१। पुरम्दरत्राः पुरमुतपताकं प्रविध्य पारेरभिनन्दामानः।
भुजे भुजक्रेन्द्रसमानमारे भूयः स भूमे धुरमाससञ्जा।

चव राजा पुनर्भमेभारं निजभेजे न्यस्वान् रत्युक्ता किमिभिशेतं कविनाः रति तातपर्यमानमुख्यताम्। छन्पताकपदस्य कः समासः। १। विलोकनाथेन सदा भखदिषम्बया नियम्या ननु दिख्यच्या।

स चेत खयं कक्षेत्र धर्माचारिका लगनगराया भवसि चुता विधिः ॥
भस्य स्नोकस्य जनराईमानं व्याख्यायता । विलोकनाच इत्यव कः
समासः, कदं वा विलोकी इति भवितये विलोक इति भृतं॥

- ध । परस्यरेण विज्ञातस्रेष्ट्रायमपालिखः।
   राज्ञा डिमवतः सारा राज्ञः सारा डिमादिणाः।
   अस सारग्रस्टेन किं किमिभिधोयते।
- ५। चय प्रभावे।पनतैः कुमारं कस्पद्गमेत्वैरवकीर्य पुनैः।
   जवाच वाय्यो द्यमप्रभाभिः भंविर्द्शते।राख्यस्रतारचारः ।
   चिस्तम् स्नोके प्रभावे।पनतैरिति पदस्य तारचार इत्यस्य चार्यः
   स्वित्वस्ताम्।

- तस्यान्वये भूपतिरेष जातः प्रतीप इत्यागसदृक्षेते ।
   येन त्रियः मंत्रयदे।षरूढं स्वभावले लियग्रः प्रस्टम् ।।
   ज्यागसदृक्षेती इति पदस्य के।ऽर्थः। जनराईस्य किं तात्पर्थः।
- । रघुवंग्रस्य सप्तमे सर्गेकविमा किं किं वर्णितमित्येतदवस्त्रस्या नितान्तर्भक्तिप्तः किंदित् प्रयन्था लिख्याताम्।
- प्रभुरत्रमुखस्य तस्य तत् छतवानोप्सितमात्राजात्रियः । नतु सर्प इव लचं पुनः प्रतिपेदे व्यवक्रितां त्रियमः । पद्यसिदं व्यास्त्रायताम् । अत्र प्रतिपूर्वेकपद्धातुः कस्त्रिवर्षे प्रयुक्तः ।

# SANSCRIT.

Examiner.—Baboo Krishna Comul Bhuttacharjea, B. A.

- १। चनापास्तमसभासि नभसः पारं प्रयाते रवा-वास्थानीं समये समं व्यक्तनः सायन्तं संपतन्। मंप्रत्येष सरोक्चयुतिनुषः पादांस्वयामेवितुं प्रीत्यृत्कर्षकता दशामुद्यनस्येन्दे।रिवादीचते॥ चस्तिन् स्रोके प्रयूक्तानां द्वार्थसन्दे।नां वाष्या क्रियताम्।
- २। इग्रः प्रयुत्तरीक्षता जितनिजास्त्रपत्रिष्टः स्तुर्भिरिप माधु साध्विति मुखेः मर्भ साहृतम्। ग्रिरांसि चिलतानि विस्नयवग्राद्धपृतं वेधमा विधाय सस्ता जगज्जनस्तामग्रतीसमाम्॥

चित्तान् पद्ये स्थितानां चाज नाघु नाघु समम् या इतम वेधम् स्नलाम इत्येषां मञ्दानामची स्लिख्तां। मिरानि इति वक्षयचनं किं निर्मितं।

 १ । पुरः पूर्व्वामेव स्थागयित तत्ताऽन्यामिप दिशं क्रमात् क्रामद्रद्रिमपुरविभागां निरयति । ज्येतः पोनलं तदनु च जनस्थेचणप्यं तमःमङ्गाताऽयं चरति चरकष्युतिचरः ।

पद्मिन्दं व्याष्ट्रायनाम्। स्यगयित इत्यंत कथंत पातयतीतित्रत अकारम्य हृद्धिः। इरकण्डस्य दुनिः कोडम्रो कथंना तथाभूता इत्यक कार्पाराणिका कथा वर्णतेः ४। रेष त्रद्धा मरोजे रजनिकरकलाग्रेखरः ग्रङ्करोऽर्थ देशिर्भेदेत्यान्तकोऽनी सधनुरिक्षगदाचक्रचिक्केषतुर्भिः। रेषाऽधिरावतस्यक्षिद्गपतिरसी देवि देवालयान्ये खत्यिन वेशिक चैतायक्षचरणरणत्रूपुरा दिवानार्थः॥

• अपन सरोज रजनिकर दैत्यान्तक निद्यपित इत्येतैः ग्रब्दैः किं किमुच्यते। कर्यं वा तेषां तत्तद्र्यवेशिधकता। देशिभेरित्यन कर्यं स्तीया।

४। श्री श्रो भीः कें।सन्तीरज्जलारेण विण तादिसे पिश्ववश्वस्सस् रिश्रभपितोसे शासीत् जादिसे मम सश्चासादे श्रज पिश्ववश्यं ग्रणिश्व भविसादि। एसे पिश्ववश्वसी दमं एव्व दिसं श्ववलेश्वश्यमा पिइदि तक्केमि म एव्य पहिवालेदि, जाव णं अवस्थामि।

चंख्नुतभाषया रङ्गरेजीभाषया च चस्यानुवादः क्रियताम्। र। निम्नस्थस्य सन्दर्भस्य मंख्नुतेनान्यादः क्रियतां।

Having proceeded into the city, Apaharavarma (चपरारक्षा) enters into a gambling house. Here he wins a considerable sum of money, and distributes half his winnings among the assistants. He then sallies forth well armed to perpetrate house-breaking, but falls in with a young and beautiful woman, who has run away from home to avoid a marriage with a rich merchant, whom she disliked.

# HINDI.

Examiner.—Baboo Krishna Comul Bhuttacharjea,
B. A.

1. Translate the following passage into English, सनत सभय मम मुच मुस्तकारे। कदत दशामन सविच सुनार्द्र । कूमिपरा कर मदत चकाशा । स्रमुतापसकर वामविचासा ॥

कच ग्रांक नाथ पत्य सव वाणो ! समुभक हाड़ि प्रकृति चिभिमानी ॥
सुनक वचन सम परिहरि क्रोंका । नाथ राम सन तजक विरोधा !
चितकोमस रघुवीर सुभाज । यद्यपि चिखिलसोककर रांज !!
सिलत कपा प्रभ तुम पर करिष्टें । जर चपराध न एकी घरिष्टें !!
जनकत्ता रघुनाथिह दोजें । एतना कहा मार प्रभ कोजें !!
जनकत्ता रघुनाथिह दोजें । चरणप्रहार कीन्ह ग्रव तेहो !!
चरण नाइ ग्रिर चला से तहां । चरणप्रहार कीन्ह ग्रव तेहो !!
चरण नाइ ग्रिर चला से तहां । कपासिन्धु रघुनायक जहां !!
करि प्रणाम निज कथा सुनाई। राम कपा चापन गित पाई !!
चिप चगनत्यकर न्याप भवानो। राचम भया रहा मुनि ज्ञानो।!
विन्द र म पद वारहिवारा। पुनि निज चानमकह पगु धारा।!

- 2. Name the original Sanscrit words changed into सभाज and त्राप in Hindi. How do you derive वैदेखे? What is the meaning of रघ in रघुनायक? Explain the metaphor क्रपासिन्तु. In what case is भवानो in the above passage?
- 3. What is the purport of— , कादरसनकर एक खधारा। देव देव खालमो पुकारा।

Is काट्रमन a compound? If so, what is the Samasa here? Parse चधारा and explain the import of the termination र्र in such words as चालमो.

- 4. जग महं मुखा निधाचर जेने। स्रामण स्नित्तं निमिषमसं तेते। What do you mean by इनित्तं and निमिषमसं? Why is a निधाचर so called? Give five synonyms for this word.
- 5. अम किंद चला विभाषण जविद । आयुद्धान में निश्चर नविद्धां ॥ Point out the nominative and the verb here. Explain the Samasa in आयुद्धान.
- 6. देखिरी जाई घरण्जालुजाता। घरण सदुल मेयकसुमदाता। What is the meaning of जानजाता? Why is it called so? What is the usual form of the word?
  - 7. Explain the allusion in के पद परिच तरी ऋषिनारी। इंडककामनपावनकारो ॥

# 8. Explain fully-

# प्रणतारतिभञ्जन रघुनाया

#### नाभ जास वय ताप नशावन.

9. Is there any rule for forming causals from the simple verbs in Hindi? Give a few examples of such verbs.

### HINDI.

Examiner.—Baboo Krishna Comul Bhuttacharjea, B. A.

1. Turn the following into Hindi prose:—

This body, my son, is frail, and wealth too is transient. So soon as born, man is followed by death. Therefore, let me quit my sovereignty, and be engaged in pious duties. For such a body and such a kingdom, it is not proper to commit great sins, since even King Judhisthir had to repent after having enacted Mohabharat. Hearing this, his son spoke, Very good; let us make over the kingdom to out kinsmen, and let us depart from this place and betake to tapasya or penance. Thus resolved, they called their kinsfolk and gave them the kingdom, and both the father and the son came to the mountain called Malaya, and there they erected a hut and began to dwell.

2. Parse the following line.

# मविषं गर्भ रजनिखरघरनो

Explain the simile in

तन कुलकमस्रविपिनदुखदाई। श्रीता भ्रीतिनिभागम आई. and also explain the Samases contained in the couplet. 3. शक परि न भार खपार खरिपति वार वार विमादर। What is the story in the Puranas about this खरिपति mentioned here? And also about the following line?

भये पच्चयुत मनचं गिरींदा।

4. इर्षि राम तव कोन्ड पथाना। सकुन भये सुन्दर ग्राभ नामा ग्राखास्त्राके यह मनुमार्द। प्राखाते ग्राखापर जार्द।। स्रोधि सिंधु हाटकपुर जारा। निखरगण विधि विधिन उजारा।। स्रो सव तव प्रताप रहरार्द। नाथ न कक्क मोर प्रभृतार्द।

Explain the words पथाना, शकुन, मनुमाई, साटकपुर and प्रभुताई. What is the primary meaning of शकुन? Do you know how it has come to bear the sense it is used in here?

5. In what case is कपाना in the line काटों तब थिए कठिन कपाण?

Explain the Sam ea in ग्यामनराज दामनमसुन्दर। What is the meaning of दाम here?

What do you mean by चन्द्रडाम in सुनु गढ अम प्रमान पन मारा । चन्द्रडाम उद सम परिनापा ।

6. Explain the meanings of the following words as used in विद्यांकर.—

स्तकार, वनस्पति, फेकड़ा प्रस्ताको स्थान, प्रस्ताको परिधि, केन्द्र and भ्रवसस्य।

7. Give such synonyms of the following words as are derived from the Sanserit.

चावाज, चक्सर, गर्मी, जानवर, मचलूम, जवाज, वजार, गर्द ग्वार, and चमकदार।

8. How are the following words rendered in the : Hindi:—

Telescope, Microscope, Vertebrated animals, North and South poles, Compass and Volcanoes.

## OORYA.

# Examiner.—Baboo Krishna Comul Bhuttacharjea, B. A.

1. Translate the following into English-

ଏହ ପ୍ରକାରେ ଅନେକ କଳାପ କର ହରଣ୍ୟକ ଚିଣାଙ୍ଗ ଓ ଳଘ୍ୟତନକରୁ ବୋଇ୍ଲ, ସେଉଁ ପର୍ଷିକ୍ତ, ଏହ ବ୍ୟାଥ ବନର୍ ବାହାର ନ ହେବ ସେହ ପର୍ଷିକ୍ତ, ମନ୍ତରକୁ ଉଦ୍ଧାର କରବା ନମନ୍ତେ, ଯହ କର । ସେମାନେ କହଲେ, ଭୁମ୍ବେ ଶୀଘ୍ ପ୍ରମନ୍ତି କହ । ଭହିଁରେ ହରଶ୍ୟକ କହୃଅଛ, ଚିଣାଙ୍ଗ ଜଳ ନକଃକୁ ଯାଇ ଆସଣାକୁ ମଲ ପ୍ରାୟ୍ ଦେଖାଉ, ଏବ କାକ ଭାଦା ଉପରେ ବର୍ଷ । ଭାକୁ ଥଣ୍ଣରେ ହାଣ୍ ଥାଉ; ଭେବେ ଏ ବ୍ୟାଥ ସେଇ ସ୍ଥାନରେ କଛୁପକୁ ରଣ୍ଣି ମୃଟମ୍ଭାବ୍ୟ ନମ୍ତର, ନଷ୍ଠ ଶୀଘ୍ ଥିବ, ଭଥିରେ ଅମ୍ବେ ମନ୍ତରର ବନ୍ଧ ପ୍ରେକ୍ତ ବନ୍ଧ ବ୍ୟାଥ ଭୂମ୍ବ ନକଃରେ ଅମ୍ବେ ଘୁମ୍ବ ଦର୍ଭ ପଳାଇ ଥିବ ।

- 2. In the above passage, what is meant by প্রভাবার? What ought to be its form in বায়তাবা?
- 3. ଗୁଧ୍ୟ କହୁଅନ୍ଥର୍କି, କହି, ଖନ୍ନବା ହେଉ। What is the difference between ଶଳ and ଖନ୍ନବା ହେଉ?
- 4. Explain the Samasa in କ୍ଷୁଧ୍ରାୟକୁ, କ୍ଷୁଧାର୍ଡ୍ଡି and ଅକ୍ତାବଧାନ

ଅନୁପସ୍ଥିତରିଲ୍ୟା କଣ ଯେଉଁ ଲୋକ ହୃଷ୍ଟ ହୃଏ, ସେ ଅସମ୍ମାନ ପାଏ What do you mean by ଅନୁପସ୍ଥିତରିଲ୍ୟ here? Explain the Samasa in it.

- 5. କୁମ୍ବମନାମ୍ୟକ ନଦ୍ୱ ଅସ୍ତ ହେଲା ଉଗ୍ରେ, Why is the moon called କ୍ୟୁଦନୀନାମ୍ୟକ୍ଧ?
- 6. Explain-

ଯାହାର ମନ ଓ ଇନ୍ଦ୍ରମ, ଅନଶୀଭୃତ ସେମାନଙ୍କ ନିମ୍। ତ୍ୟୁର ସ୍ନାନ ସଦ୍ୱଶ ହ୍ୟ, ଦୂର୍ଭ୍ଗା ସ୍କୀର ଅଲଙ୍କାର ଭୂଲ୍ୟ ହିମ୍ବା ବ୍ୟତରେକେ ଜ୍ଞାନ କେଳେ ଭ୍ର ଅଟେ । 7. Explain the Sandhi and Samas in the following words. କ୍ୟୋଭର୍ମୟ, କାଷ୍ଠର୍ୟତ, କରୁଦ୍ଧି, କଲ୍ଷପ୍ । କୃତ୍କୃତ୍ୟ ।

ଥି । ଜମ୍ବା ଉଷକାର ହେଭୁର୍ ଯେଉଁ ଲୋକ ଶ୍ୟୁଠାରେ ଥିଏଡ କରେ ସେ ବସଦ୍ଧିୟ ହୋଇ ବୃକ୍ଷାମ୍ତର୍ ପଡଡ କୌନସି ବଦ୍ୟାସତ ଲୋକଷର ଚେତନ। ସାଧ୍ୟ ।

- 8. What is the meaning of ଉପକାର ହେଉରୁ ଶେଷ୍ଠାରେ ମନ୍ନର and କ୍ୟାକ୍ସର ? What is the Samas in ବ୍ୟକ୍ସ୍ୟୁ and ନଦ୍ୟର ?
- 9. What part of speech is Genin in Ooriya and also মার and আমার ? Write a sentence to show the use of each of these words.

# OORYA.

Examiner.—Baboo Krishna Comul Bhuttacharjea, B. A.

# 1. Translate into English-

ସେହ ପ୍ରସ୍ତ ସମୟତେ ଧୀତକାରର ପାମ୍ ଏମତ୍ର ନବଡ଼ କୃତ୍ତ୍ତା ହୋଇଥିଲା ଯେ କୋନ୍ୟ ମନ୍ଧ୍ୟ ଅଞ୍ଚତ ଛୁମ୍ ହାତ ଯାଏ ଦେଖିବାକୁନ ପାଇରେ । ଚେବେ ଇଫାଗ୍ରମାନେ ଯ୍ବ କରବାକୁ ବସଞ୍ଚତ ଛୁମ୍ ହାତ ସେମାନଙ୍କ ସକୁ ସମେତ ଦୁର ଶଅ କୋଡ଼ଏ ସେନ୍ୟ ନାଣ ଗରେ ମାବ ନବାବର ତାହା ଠାଞ୍ଚ ବଅଥିକ ସେନା ପାଡ୍ମ୍। ନାଣ ହୋଇରେ । ଏଥିରେ ନବାବ ଏସର ସାହ୍ୟ କର ଚଡ଼ାଉରେ ଉମ୍ ପାଇ ଅଟ୍ୟ ବରେ ନବାବ ଏସର ସହେ କରେ ପ୍ରଭେ କରବାକୁ ଅପ୍ରସ୍ତ ଯୁଦ୍ଧ କରେ ଭ୍ୟାତ୍ତ୍ର ପ୍ରଥ୍ୟ ବ୍ୟକ ଅଟେ ଛାଜ୍ନ

ଭ୍ଠାଇ୍ ଆହୃର ଖ୍ୟ କୋଣ ଦୂରରେ ଘେନ ଗଲା । ତହିଁରେ କୁାଇବ ସାହେବ ପୁନଙ୍କାର ଚଡ଼ାଭ୍ କରବାକୁ ଭ୍ଦ୍ଯୋଗ କଲା । ମାଏ ସେଶ୍ୱଭ୍ଦୌଲ ଯୁବରେ ମନୋଦୁଃଖ ପାଇ ସନ କରବାକୁ ଅଣୀବାର କର ସନ୍ଧ୍ୟରେ ସାକ୍ଷର କଲା ।

- 2. Point out the words that are of Sanscrit origin in the above passage, and explain their Sandhi and Samas, if any.
  - 3. What are the ସାଧିତ୍ୱାଷା synonyms for କ୍ରସ୍ଥିତି, ହାଉନ, ପାଉଆ and ଚଡ଼ାଉ ।
- 4. Point out the participles contained in the above passage.
- 5. ସଙ୍ଗ ବୋଲ୍ ସତ୍ପମରଣଣ୍ଡରେ ଗ୍ରସଭ୍ରେ ବହୃକାଲ୍ବଥ୍ ମନୋଯୋଗ ଦୋଇଥିଲ

What is the real-meaning of the word an? In what sense is it used here?

6. ଏହ ବ୍ୟବହାର ଧମିହେ ହୃଅନୁ । ମାଖ କୌନସି ଶାୟରେ ଏଉପ କଣ୍ବାର ନର୍ଦେଶ ନାହିଁ ।

What do you mean by ประเว and ครร์ส here?

7. Translate the following into Oriya-

They entered the city, taking the prince with them. In spite of mantra or charms and medicines, the prince continued to speak those very words. The king, troubled in mind, said, "If my gooroo or spiritual instructor were alive at present, it had not been thus with my son! Wretch that I am, I killed him at that time, and my own sin has brought me to this condition." On this occasion, his minister said, "O king! We ought not to grieve for what is past."

## URDU.

# Examiner.—MR. H. BLOCHMANN, M. A.

# 1. Translate—

جس وقت كه بيل يهه كهه چكا سب حيوان دَارَهه ماركر روخ اور كهنے لئے - اى بادشاہ عادل - هم پر رحم كر اور ان ظالم آدميون عظم سے هماري مخلصي كر - جتنے حكيم اور عالم جذون كے حاضر نيے بادشاہ نے سنكرالكي طرف ديكها اور كها - كه حيوانون نے جو ظلم اور برجمي اور تعدي آدميون كي بيان كي سني تمنے ؟ انہون نور برض كي كه هيئے سني اور سب سے هي - رات دن ديكهتے هي هين عرض كي كه هيئے سني اور سب سے هي - رات دن ديكهتے هي هين كسي عاقل و هوشيار پر انكا ظلم چهپا نهين هي - اسي لئے جن بهي دن كا ملك چهور كر جنگل و بيابان مين بهائے اور تيلے پهارون درياون مين جا چهيے -

- 2. State whether in the above words الكي عرض عرض عرض the ي of كي is معروف or الكي طرف Give reasons.
- 4. Give the Hindustani equivalents for— منگل جنگل امید اتفاقا امید مراجعت کرنا ساعت تسلیمات رویق التماس کردا نهایت رویق
- 5. How are the plurals of nouns formed in Hindustani? Give examples.

# 6. Translate-

During the reign of Akbaş the tasleem was performed in the following manner. The back of the right hand was placed upon the ground and raised slowly, till the person stood erect; he then put the palm of his hand upon his head. Akbar used to relate as follows: One

day my father gave me a cap ( $\xi^{G}$ ) which I put upon my head; but as it was too large for me, I held it on with my left hand, bowed down my head and made the tasleem."

7. Correct the errors of the following passage, putting the vowels to each word—

بعد مون کا استخوان کهنه و پوسیده کوخدا زنده کوتا هی مسبحان الله کیسا خالق هی که زنان انسان کا اسکے حمد اور وسف مین کاسر هی کیا امکان که اسکا کنه عقل کو رسائی هی م

- 8. Decline the pronouns مين , كوأي and مين , كوأي
- 9. Give the meanings and etymologies of معتي , معالل المواسط , شترصرغ و سنگخواره , ساگهايي , دانشمندي , هزاردستان , گدرانا , اسواسط , اشترصرغ و سنگخواره , ساخوان الصفا بالکل , بلوانا .
  - 10. Decline the nouns جه, ما ,هندو
  - 11. Translate—

جب که الله نعالی نے حضرت ادریس پیغمبر کو الهیجا۔ اُنہوں نے آکر آدمیوں اور جنون میں صلح کروا دی اور سب کو دین و اسلام کی راہ دکھلائی جن بھی آدمیون کے ملک مین آئے اور ان سے ملکر آپس مین رہنے لگے اسیطرح طوقان ثانی تلك اور بعد اسكے بھی حضرت ابراهیم خلیل الله کے زمانے تك بخوبی گدري ۔

# URDU.

Extiminer.-Mr. H. BLOCHMANN, M. A.

1. Translate-

پهر گوشت اور ترکاري کسکو غرض هی که منگوائے اور کهائے مگر تصوروت یا نسبب عادت و سواے اسکے پهول پهل هر ایک موسم کے خوشبو خوش ذایقه بافراط میسر آلے هین اور خواهشمندونکے دل و دماغ کو راحت و آ آ آ پہنچائے هین و مقوطن وهان کے بچبا شروا هر قوم کے پر شیخ سید اکثر بلکه فضلاً علما بهی و محمد شالا فردوس

آرامگاہ کے وقت تلک شہر مذکور خوب آباد تھا ، اور عالم فاضل بہہ فالب تھے که ماہ رمضان میں مقدور نه تھا که دوپہر دھلے تلك نانبائي یا بھتیارا تنور گرم کرے یا بھتر بھونچا بھلتر جھونکے یا کوئي بازار میں دن دیئے حقه پیٹے ، احیانا اگر کسی سے ایسی حرکت هوجاتی تو صحفسب کے هاتھہ سے آسکی آبرو جاتی ،

- 2. Who is Muhammad Shah? What is meant by
- 3. Parse, either in English or Hindustani, the first two lines of the above passage. Write out the genuino Hindustani nouns of the whole passage.
- 4. Write down the first person singular of every tense of the verb by active and passive.
- 5. Give the vowels of وطن , معمولي , ورمضان , وطن , معمولي , ثنور , رمضان , وطن , عنوالت . Show that the following words may have different meanings according to a difference in the vowels ,قدر ,خلق , مشرف .
  - 6. Explain the titles خان , مير , ميرزا , مير , خواجه جان , مير , ميرزا , مير , مير , خالم , ليگ , فوجدار , مقصدي , ولي
- 7. Express in Hindustani 58, 47, 59, 97½, 78¼, 66¾, 1250013; the 3rd, the 15th, the 47th.
  - 8. Translate—

سے تو یہہ هی که اگر بهشت میں هوتے تو حضرت آدم علیه السالم م

Explain the allusion and the plural L.S. Give the rule of the construction of ...

- 9. Explain— مد سكندر حمام افلاطون و باغ إرم و روضة رضوان و جامع مسجد مدون السعدين و المار ولايت و برج حوت و ردن منجري والايس
- 10. How are Adjectives inflected in Hindustani? Give the rules and some examples. Translate, "This is rather black than green."

# 11. Translate—

یہہ چنپا کے پہولوں میں هیگی مہک لیت آئکی جاتی هی گردوں تلك میں ربگت میں تشبیه دوں آسے كیا كه بن اس جوهر هی پكهراج كا هر ايك گل كا هى ربگ و عالم جدا نہیں لطف سے كوئي خالى

12. Write in Urdu a short application for sickleave addressed to a teacher.

# ARABIC.

Examiner.—MR. H. BLOCHMANN, M. A.

# 1. Translate-

قال كذت مع على بن عيسى لما نفي الى مكة فدخلنا في حر شديد و قدكدنا بنلف قال فطاف على بن عيسى وسعى و جاء فالة نفسه و هو كالميت من الحر و التعب و قلق قلعا شديدا وقال اشتهى على الله شربة ماء مثلوج فقلت له سيدنا ايده الله تعالى يعلم ان هذا ما لا يوجد بهذا المكان فقال هوكما قلت ولكن نفسي ضاقت عن سترهذا القول فاستروحت الى المدى قال خرجت من عنده فرجعت الى المسجد الحرام فها استقررت فيه حتى نشات سحابة و كثفت فبرقت و رعدت رعدا متصلا شديدا ثم جاءت بهطر يسير و برد كتير فبادرت الى الغلمان فقلت اجمعوا قال جمعنا منه شيئا عظيما و ملانا منه جرارا كذيرة وجمع اهل مكة منه شيئا عظيما و

- 3. Write out the last three lines of the above passage with the vowel points.
- 4. Form the 2nd person singular, masculine and feminine, of the Imperatives and the Futures of مقت , مقب ,

- 5. Inflect the Perfect Active and Passive of يرمي, giving the English meanings.
- 6. Explain the form of all. Translate—"my God, our God, Godhead."
- 7. Give the plurals of جاریة , ملد , حبیب , عالم , نار , جاریة , بعد , بعر , بعر , بعر
- 8. Translate—his book, two books, his two books, thy two books, thy sons, for thy sons, my judge, my slaves, my desire (عرى), O my people! the whole house, a king's daughter, the king's daughter, the army of the king, the great army of the king.
  - فوالله ما رايت اشجع منه ولا افصح منه ــ Translate و العمري ما وجدت مثله قط وعسى ان لا يجد مثلي

# ARABIC.

# Examiner.—Mr. H. BLOCHMANN, M. A.

- 1. Translate—there was a merchant; he was a merchant; my father is sick; my sick father; he is not standing, but sitting; he dismounted from his horse; whose is this book; I did not know whether he came yesterday; he is high in station and rich in wealth; he loved poetry and the poets; they sat down at the door; Haroon died at Tus; if I had known this, I would have beaten you; if you do not do so, you will perish; he came to a spring of water to drink.
- قال له عووة ابلغ اميرالمؤمذين مدي السلام --Translate وقل له عيف رايت قولى صعيت و رجعت خائبا فاتابي رزقي في مغزلي والله درمن قال

واقاع بايسر رزق الت بائلة واحذر ولا تتعرض للارادات فما صفا البحر الا وهومدتنص ولا تكدر الا في الزيادات

- 3. Put the vowel-points to both verses, and explain در میں قال.
  - 4. What is meant by the إافعال المدح والذم
- 5. Form the adjectives of ببي , در ش , معدي , طى , معدي , معدي , المديدة , مصطفى
- 6. Write down the numerals from 1 to 10. Express ten men and ten women; three men and five women.
  - 7. Translate—

لقاء الداس ليس دفيد شيان سوى الهذيان من قيل و قال فاقلل من لقاء الداس الا لاخذ العلم و إصلاح حال Inflect.

8. Translate-

PERSIAN (GULISTAN).

Examiner.—Mr. H. Blochmann, M. A.

# 1. Translate-

یکی در صنعت کشتی گرفتن بسر آمدی بوه که سیصد و شصت بدد فاخر درین علم داستے و هر روز بنوعی دیگر کشتی گرفتے ه مگر گوشهٔ خاطرش با جمال یکی از شاگردان میلی داشت و سیصد و پنجای و نه بندش بیاموخت مگریك بند که در تعلیم آن تاخیر کرده فی الجمله پسر در صنعت و قوت بسر آمد و کسے را با او امکان مقاومت بهاند بحدے که روزی پیش ملك آن عهد گفت که آستاد را فضیلتے که بر منست از روی بزرگیست و حق تربیت و اگریه بقوت از و

كمتر نيستم و بصنعت بااو برابرم ، ملك را اين سخن ناپسند آمد بفرمود تا مصارعت کندد .

- 2. Parse, either in English or Persian, the first line the above.
- 3. Write out the words which in the given passage ave the اضافت مقلوبي. What is meant by ? اضافت تشبيه
- 4. Write down the 3rd persons plural of every tense f the Passive of گرفتن.
- وضحاك, قرك وتاجيك و كابج قارون, ذوالنون و حاتمطائي Explain What . تغور اسلام , پروین , حصاي تعبه , ادو هریره , خندق , اطرابلس s the name of the king of Persia to whom the تسعدي Julistan is dedicated? Explain the takhallus
- 6. Write down the Imperatives of رهيدن , شكافتن , سهودن رگزیدن ,فهمیدن ,بختن ,بسندیدن ,شناخنن, آختن,انداختن,شکستن ind the negative Imperatives of آراستن استادن , آوردن .جستن رشدن رشستن رهشنن ربودن رگسستن يارستن
- 7. Explain the prefixes اهمي , فول , ووو ; and the affixes ,گون , سار ,وار , گان ,ويه , وش , گر ,لا,مند , آمه , اش affixes examples. What is the meaning of the final ويدبي in ج بردنی and
  - 8. Translate and write out the Λrabic words— ليك باتراشيده در مجلس برنجد دل هوشمندان بسي اگر برنگ پر کنند از گالب سگی دروی افتد کند صلحالب
  - 9. Translate-

من بند} حضرت كريمم \_ پروده نعبت قديمم با أن كه نضاعتي ندارم أسرماية طاعتي ندارم او چارهٔ کار بنده داند چون هیچ وسیلتي بهاند رسيست كه مالكان تعرير آزاد كللد بددؤ بير سعدي رد كعبة رضا كير اي مردخدا رد خداكير بدبخت کسی که سربتابد زین درکه دری دگر نیابد

- 10. The possessive pronouns in Persian may be formed in two ways, either joined to the noun or separated from it. Take aik and form "my house, my houses, thy house, thy houses, his house, his houses, our &c. &c."
- 11. Translate—May he live; may he die; may it be thus.
- 12. Give the etymologies of لاجرم , مصطفى , حور , شپره الاجرم , مصطفى , حور , شپره الاجرم , عليحده , عنقريب

# PERSIAN (BOSTAN).

Examiner.-MR. H. BLOCHMANN, M. A.

# 1. Translate—

I would go—we ought to do it—I do not wish to send you anywhere—Zaid said that his brother was not at home—I gave the book to that man—I bought a horse for \$00 rupees. Preserve us from the path of error! He concealed himself. Whose horse is that? A sword hung above his head. Sultan Mahmud the son of Sabaktagin.

- 2. Write down the 1st persons singular of every tense of the Active of خعتی.
- 3. Express in words and in numerals—73, 886, 419, 536, 1867; the 19th, the 101st, the 999th.
- 4. How are Diminutives formed in Persian? Give examples.
- 5. (live examples of the واو معدوله ; 2. Of the الف وصل ; 3. Of nouns ending in وار ستان , as in زار رستان ; 3. Of nouns ending in يكوي

- 6. Explain the forms درختان,نیم ,چنوئی ,شنیدستم ,گفتا, پدرم ,شدندی ,نومید Translate .در رزق زن How would you say in prose?
- 7. Translate—It was midnight, when Akbar received the news that Faizi was dying. He hastened to the room of the sick man, but found him insensible. He raised his head and called out, "Shaikhjee, I have brought Ali the physician to you; why do you not speak?" But he got no answer.
- 8. Explain ججاج يوسف وابن السبيل ,خار مغيلان,خجند, تهليل وابن السبيل , مار معروف كرخي , فوزند لا آبالي ومشعبذ وموبد ومعروف كرخي , فوزند لا آبالي ومشعبذ وموبد ابر نيسان ابر نيسان
  - 3. Translate-

شناما و رور در اقصای روم برفتیم قاصد بدیدار مرد بدیدار مرد بدیکین و عزت نشانه ونشست ولی به مروت چوب بر درخت ولی دیگدانش قوی سرد بود زنسبیم و تهلیل و مارا زجوع مان نطف دوشینه آغاز کرد که با ما مسافر دران ربع بود که درویش را توشه از بوسه به مرا دان دو وکفش بر سر بزن

شنیدم که مودیست پاکیزه بوم من و چند صعلوات صحوا نورد سروچشم هریك ببوسید ودست رزش دیدم و زرع و شاگرد ورخت بلطف و لبق گرمزو مرد بود همه شب ببودش قرار و هجوع سحرگهمیان بست و در باز كود یكی بدله شیرین و خوش طبع بود مرا بوسه گفتا به تصحیف ده بخدمت منه دست بر كهش من

# HISTORY.

Examiners. - { Mr. J. K. Rogers. Mr. D. Carnduff.

1. Give the following particulars regarding each of the four great empires of antiquity, the Assyrian,

Babylonian, Persian, and Grecian;—(1) The name of the founder, (2) the date of its rise to supremacy, (3) the circumstances of its fall, and (4) the date of its fall.

- 2. What did the Peloponnesian war commence about? In what year did it begin? How long did it last? Give the names of some of the most celebrated generals on both sides, and of four or five of the great writers of Greece that flourished during its course.
- 3. Give the date of each of the following battles, the names of the commanders on each side, and of the conquering party:—Tellicotta, Ægospotamos, Cunaxa, Wandewash, the Granicus, the first great battle of Paniput, Cynocephalæ, and Philippi.
- 4. Mention in chronological order a few of the principal events in the lives of Pompey the Great and Baber.
- 5. Show as clearly as you can what were the duties and the authority belonging to the following offices:

  —Archen, Satrap, High Priest, Consul, Prætor and Censor.
- 6. Give the name and the date of accession to the throne of each of the three sovereigns of the Lodi family.
- 7. Who were Mahmood Gawan, Rana Sanga, Shere Khan Afghan, Meer Joomla, and Daood Khan? Mention some important event in the career of each.
- 8. Mention the principal events in the career of Lord Clive from the time of his last return to Bengal until his death, giving the dates.

# GEOGRAPHY.

# Examiners — { Mr. H. Roberts. Rev. H. Larcher.

- 1. Name all the maritime counties of England, and give the chief town of each.
- 2. Give the exact situation of the following, and state if there be anything remarkable connected with them: Cracow, Shiraz, Toronto, Bosphorus, Porto Bello, Louvain, Missolonghi, Navarino, Nagasaki, and Hobart Town.
- 3. Describe the course of the following rivers, and name the towns by which they respectively pass; Jumna, Irawady, Mississippi, Godavery, Rhone, Kistna, Nile, and St. Lawrence.
- 4. Name the inland countries of Europe and Asia, with their chief towns, rivers, and mountains.
- 5. Name the principal scaports of France, Italy, Spain, and Portugal, give their principal articles of export, or state any remarkable circumstance in connexion with them.
- 6 Describe the course of a vessel sailing along the coast from Suez to Canton, and name all the ports lying on her route.
- 7. Give in detail the British possessions in Africa, Asia, and Oceanica.
- 8. Give an outline map of Northern India, or Hindustan proper, indicating the position of the several states and their chief towns, the course of the rivers, and the direction of the mountain chains.
- 9. Name the independent and the protected states of India, with their chief towns.

10. Name those provinces, both within and beyond the limits of India proper, that constitute the presidency of Bengal.

# ARITHMETIC AND ALGEBRA.

- 1. The driving wheel of a locomotive is 226 inches in circumference, and makes 91 revolutions per minute; at what rate per hour is the engine travelling?
- 2. Divide the least common multiple of 156, 260, 720, and 429 by their greatest common measure, and find the square root of the quotient.
- 3. If a butcher buy 10 cwt, of beef at 44s-4d, per cwt and sell it at the rate of 1½d, per lb., how much does he lose or gain?
  - 4. Find the value of the following expressions:—

$$\begin{array}{ccc} 5_{6} \times 3_{1} \times 9_{2} \times 3_{1} & \text{and} \\ 1_{6} \times 67 & \end{array}$$

0.625 of £143 128 0
$$d$$
 + 0.625 of £71, 168, 0 $d$ .

- 5. Reduce £1 5s, 6d to the fraction of £1,000, and 5s,  $1 \frac{1}{8}d$ , to the fraction of £150, 10s,, and express the results both as vulgar and decimal fractions.
- 6. If £450 amount to £523, 10s in 1 year 8 months, calculate the rate per cent.
- 7. Reduce to its lowest terms  $\frac{x^4 x^3 x + 1}{x^4 + x^3 x + 1}$  and find the greatest common measure of  $2x + 9x^2 + 4x 15$  and  $4x^3 + 8x + 3x + 20$ .

or show that 
$$\binom{b}{c} + \frac{c}{b}$$
,  $+ \binom{c}{a} + \frac{a}{c}$ ,  $+ \binom{a}{b} + \frac{b}{a}$ ,  $= 4 + \binom{b}{c} + \frac{c}{b}$ ,  $\binom{a}{c} + \frac{c}{a}$ ,  $\binom{a}{b} + \frac{b}{a}$ 

9 Prove either of the identities—

$$(ay - ba)^{2} + (\epsilon x - ac)^{2} + (bz - cy)^{2} = (c' + y' + z') (a^{2} + b^{2} + \epsilon^{2}) - (av + by + cz)^{2}.$$

$$(av - a)(s - b)(s - c) = 2a^{2}b^{2} + 2a^{2}c^{2} + 2b^{2}c^{2} - a^{2} - b^{2} - \epsilon^{2} \text{ where } 2s = a + b + c.$$

10. Solve either of the equations—

$$\frac{(x+\frac{1}{2})(x-\frac{1}{2}) - (x+5)(x-3) + \frac{3}{4} = 0}{\sqrt{x+a}} + \frac{\sqrt{x+b}}{(\sqrt{x-a})(\sqrt{x-c})} + \frac{\sqrt{x+b}}{(\sqrt{x-a})(\sqrt{x-c})} = 0$$

11 Solve the simultaneous equations—

12. Extract the square root of—

$$x^{6} + 8x^{3} - 2x^{3} + 16 x' - 8x + 1$$
or  $a^{4} + b^{4} + c^{4} + d^{4} - 2 (a' + c^{2}) (b' + d) + 2 a' b'$ 
+2b'  $d^{4}$ 

#### GEOMETRY.

# Examiners.— { MR. C. MARTIN, B. A. MR. M. MOWAT, M. A

- 1. a. Define (1) a plane rectilineal angle, (2) parallel straight lines, (3) a thombus.
- b. Construct an isosceles triangle having each of the sides double of the base.
- 2. a. If two angles of a triangle be equal to each other, the sides which subtend or are opposite to the equal angles shall be equal to one another.
- b. The straight line which bisects the vertical angle of an isosceles triangle bisects the base perpendicularly.
- 3. Parallelograms upon the same base and between the same parallels are equal to one another. In what different senses is the word equal used by Euclid when treating of the equality of triangles?
- 4. If a straight line be divided into any two parts, the square on the whole line is equal to the squares on the two parts, together with twice the rectangle contained by the parts. Prove this, and show from it how  $x^2 + 2xy$  may be made a complete square.
- 5. Describe a square equal to a given rectilineal figure. fine a gnomon.
  - 6. The angle at the centre of a circle is double of the angle at the circumference upon the same base, that is, the same part of the circumference. Prove this, not omitting the cases when the angle at the centre is equal to or greater than two right angles.
  - 7. The opposite angles of a quadrilateral figure described in a circle are together equal to two right angles;

the angle in a segment of a circle greater than a semicircle is less than a right angle; and the angle in a segment less than a semicircle is greater than a right angle. Prove these propositions as deductions from question 6.

- 8. If two chords in a circle intersect one another, the rectangle contained by the segments of the one is equal to the rectangle contained by the segments of the other.
- 9. Inscribe a circle in a given square. What proposition in the 4th book enables us to divide a right angle into ten equal parts? Give the number or enunciation.
  - 10. Describe a rhombus equal to a given square.

# First Examination in Arts.

# ENGLISH POETRY.

Examiners.—Mr. C. H. TAWNEY, M. A.

(a)	anon they move
	In perfect phalanx to the Dorian mood
	Of flutes and soft recorders

1. Explain the following passages:—

- (b) ——— for never since created man

  Met such embodied force, as named with these

  Could merit more than that small infantry

  Warred on by cranes.
- (c) As when Alcides from Echalia crowned
  With conquest, felt the envenomed robe, and tore
  Through pain up by the root Thessalian pines,
  And Lichas from the top of Eta threw
  Into the Euboic sea

- (d) Or hear'st thou rather, pure ethercal stream, Whose fountain who shall tell?
- (e) Here pilgrims roam that strayed so far to seek In Golgotha him dead who lives in Heaven.
- 2. Paraphrase closely (making brief notes wherever a word, a construction, or an allusion seems to you to require it)—

Much suffering heroes next their honors claim Those of less noisy and less guilty fame, Fair Virtue's silent train; supreme of these Here ever shines the god-like Socrates: He whom ungrateful Athens could expel, At all times just, but when he signed the shell: Here his abode the martyred Phocion claims, With Agis, not the last of Spartan names: Unconquered Cato shews the wound he tore, And Brutus his ill genius meets no more.

Scan the first four lines of the above extract.

- 3. Note grammatically the italicized words in the following extracts:—
  - (a) At length the winds are raised, the storm blows high.
  - (b) Syphax, I now may hope thou hast forsook Thy Juba's cause.
  - (c) A soul, exasperate in ills, falls out
    With everything ———
  - (d) Nay then, beware thy own, proud barbarous man.

- (e). Tis Heaven itself that points out an hereafter.
- (f) ——Methinks, I see
- Unusual gladness sparkling in thy eyes.
- 4. What was the success of Addison's Cato? How far does t seem to you to have been deserved?
- 5. In what sense are the following words used in the poetical subjects appointed for this examination':—savage, oblivious, amerced, uncouth, wasteful, cypher, wit, brave.

Construct short sentences to exemplify their use in modern English prose,

- I should be much for open war, O Peers,
  As not behind in hate, if what was urged
  Main reason to persuade immediate war,
  Did not dissuade me most, and seem to cast
  Ominous conjecture on the whole success;
  When he, who most excels in fact of arms,
  In what he counsels, and in what excels
  Mistrustful, grounds his courage on despair,
  And utter dissolution, as the scope
  Of all his aim after some dire revenge.
  First, what revenge?
- 7. In the expression "Temple of Fame" what is the full meaning of the word Fame? Quote anything that Shakspeare or Bacon have said on the same subject.

# ENGLISH PROSE.

# Examiner.—REV. F. R. VALLINGS, B. A.

- 1. Addison criticises Milton's Paradise Lost with reference to (1) the fable, (2) the characters, (3) the sentiments, and (4) the language, and he compare Milton's poem with the great epics of Homer and Virgil. Under each head show the excellencies and defects of Milton, and the relative merits of Homer and Virgil. From whom does Addison borrow the quadripartite divison of the criticism?
- 2. Explain the meaning of the word "episode," and give the reason assigned for the use of episodes.
- V 3. What is the meaning of the words Imagination and Fancy, as used by Addison? What is the present usage of these words? Give their etymology and their history.
- 4. Wit has been defined to be "a propriety of words and thoughts adapted to the subject." Whose definition was this? How does the Spectator show the erroneousness of it? To what does he consider it to be truly applicable? What does the Spectator consider to be the best and most philosophical account of wit? From whom does he take it? What addition does he propose? How does he distinguish between true and false wit?
  - 5. Explain and add grammatical notes to the following passages:—
    - (a) Imparadised in one another's arms.
    - (b) Adam the goodliest man of men since born His sons, the fairest of her daughters Eve.
    - (c) The child may rue that is unborn.

      The hunting of that day.

- (d) The pleasures of the imagination are not so gross as those of sense, nor so refined as those of the understanding. These last are more preferable because they are founded on some new knowledge or improvement in the mind.
- (e) Was man like his Creator in goodness and justice, I should be for allowing this great model.
- 6. Give paraphrases of the following passages, with especial reference to the words in italies:--
- (a) The rude style and evil apparel of this antiquated song.
- (b) Because the mind cannot always be in its fervours, nor strained up to a pitch of virtue, it is necessary to find out proper employments for it in its relaxations.
- (c) The immateriality of the soul has been evinced to almost a demonstration.
- (d) Were a human soul thus at a stand in her accomplishments; were her faculties to be full blown, I could imagine it might fall away insensibly and drop at once into a state of annihilation.
- (c) Animals in their generation are wiser than the sons of men.
- (f) Though his actions are never so glorious, they lose their lustre when drawn at large and set to show by his own hand.
- (g) To see his creation for ever beautifying in his eyes. (What is the present use of the word beautify?)
- 7. "Mr. Dryden makes a very handsome observation on Ovid's writing a letter from Dido to Æneas in the following words." What is the fault in this sentence, and what the meaning of the word "handsome" in it?

- 8. Give rules for the use and omission of the definite article. Why is it used with adjectives in the superlative degree?
- 9. Paraphrase closely the following passage, and write explanatory notes on the words in italics:—

These are mob readers.—If Virgil and Martial stood for parliament-men, we know already who would carry it. But though they made the greatest appearance in the field, and cried the loudest, the best of it is they are but a sort of French Huguenots or Dutch Boors, brought over in herds, but not naturalized; who have not lands of two pounds per annum in Parnassus, and therefore are not privileged to poll. The authors are of the same level, fit to represent them on a mountebank's stage, or to be masters of the ceremonics in a bear-garden.

# SANSCRIT.

Examiner.—Pundit Mohesh Chunder Nyaratna.

- 1. Paraphrase the following lines in Sanscrit:

  यदात्मा अभ नात यदि वा दुष्कृतं छतम्।

  शिय वाष्प्रियं वा ते वागुक्ता न स्पा भवेत्॥

  स रच तात मन्त्रध मपकांच मंभोइर।

  यथा तस्य तथा नन्त्रं निर्विश्चषा वयं लिय।

  भवत्व यथा तस्य पास्र्यास्थान् यथा कविः॥

  चेमेणाभ्यागते।ऽरण्यादिप मां स्विध्यति॥
- 2. Write the following slokas in prose order, and explain the allusion contained in the last sloka.

राजासमस्थितस्याद्धः वितुर्धातरमात्रितम्। इङ्गोत्तसं भूषस्रके तमारोडुं मनोरसम्॥ षदात्रीषमञ्जूनं देवदेवं किरातकपं त्राम्बकं तोष्य युद्दे । खवाप्तदम्नं पाद्मपतं महास्त्रं सदा नाशंभे टिजायाय मञ्जय ॥

3 By whom and to whom are the following two lines addressed?

श्वताऽन्यथानुवर्भत्सुतेजमः काल उत्यते ॥ तद्दं तेजमः कालं तव मन्ये नराधिषः।

4. Parse the words marked \* in the following lines, and point out the compound words contained in them—explaining the simasa of each in Sanscrit.

दुःशासमञ्जूषां से सन्त्रयामासुरेकतः स्वस्यस् वः पथि मदा भूते भ्ययेत्र सर्व्वशः । सा च वे प्रत्वशः में किश्चित सर्व्वशः पाण्डनस्टमाः ॥ भूतमस्वादस्यस्यासा भविष्यन्ति प्रधानतः । स्विष्यस्य वेश्वानः ।

5. If from the expression धर्माराज in the following pasage the word धर्म be taken away, how will the word रा tand?

# वचनस्य ह्याभिर्गा जिस्टंसत्रवीत॥

6. Give the sandhis in the following line.

भवतात्रवृथास्येवं पक राज्याऽभिषिचनाम॥

7. What terminations do nouns take when connected rith the words

विमा ऋते. किं, प्रति, मम् प्रयक ?

8. Give the etymology of the following words:

च्येष्ठ'. ष्टयः, चाददोरम्, ममृदितं, जिन्नाणं

- 9. Decline the words चंदम्, पामन, ख, and conjugate ie verbs पा and मम.
  - 10. Translate the following sentences into Sanscrit: There is a poor blind man at the door. He is quite

blind. He does not see the sky, or the ground, or the trees, or men. He does not see us, though we are so near him. A boy leads him from door to door.

# SANSCRIT.

Examiner.—REV. K. M. BANERJEA.

1. Translate the following passage into English:

ग्रिशे उबद्त् मार्जारा हि मां मरचयः पित्त धावका धाव निवसिन मेना चमेवं व्रवोसि। सच्चुला मार्जारे। भूमिं स्पृष्टा कर्णा स्पृश्ति वृते च मया धर्म धास्त्रं युत्वा वोतरागेणे दं दुष्कारं वृतं चान्द्रायण मध्यव-मितम। यतः परस्परं विवद्मानानामपि धर्म धास्त्राणां चिहिं सा परमा धर्मा दुरा विकास्यम।

सर्व्यसिमानिष्टमा ये मराः सर्व्यमेदाय ये।
सर्व्यस्याययभूताय ते नराः स्वर्गगामिनः ।
एक एव सुद्धक्ती निधनेऽप्यनुयाति यः।
सरोरेण समं नाम्नं मर्वमन्यमु गन्धति ।
योऽमि यस्य यदा मांममुभिधाः पम्नतामरम्।
. एकस्य चणिका प्रोतिरन्यः प्राणैर्विमुच्यते।
सन्दर्भन्यातेन स्राक्षेनापि प्रपूर्याते।
चस्य द्रभोदरस्तीर्थं क कुर्यात् पातकं महत्॥

- 2. In what voice is युवा in the 4th line? Conjugate is in the potential mood, i.e. चो or विभिन्न Give the past passive participle of निवसन्ति, and the imperative third person singular of स्वृत, and the imperative second person singular of स्वृत
- 3. Give the rule f r the change of n medial into w. Is there any exemplification of that rule in the above extract?
  - 4. What are the roots of धार्यात चित्त, मुचते. Give their

third person plural present tense, and second person singular imperative mood, both in the active voice.

चश प्रचाते चेनपतिर्लगुइडलसं प्रदेशं गच्छन् कालेमावलीकिं तः। तमालाका कालेनिकं सखे सग लमालानं स्तवत सन्दर्श्व वाते-नादर पूरियला पादान् सन्धालत्य तिष्ठ। चहं तव चतुषा चल्रचा लिखानि। यदाइं शब्दं करामि लमुत्याय सलरं प्रजाधियने। स-गन्या कालवचनन स्थितः। ततः चन्नपतिना इर्षत्पृक्षलीचनेम तथ विधा सग चालाकितः। चयाना चाः सयं सताऽपि रत्युक्का सग व-वन नाचित्वा पाशान् प्रदोतुं मलरा ४ मृत

- 5. Is there any instance of the Bahuvriki samása in the above extract?
- 6. What part of the verb is मन्दर्भ ? Give its root, and also the roots of मन्दर्भ तिह, करासि, प्रदातुं as well as their first person singular first preterite घाठा लड़.
- 7. Why is it चंत्रपातना and not चन्नपत्या? What is the gender of चन्नना?
  - 8. Translate the following lines into English:

यदार्थं व त्रिस्विस्थ धनञ्जयं

भजात् माचादियमक्षं ययायत्।

च्यायानं संभितं सत्यमसं

तदा नःश्मे विजयाय मञ्जय ॥

यदात्रीषं माधवं बासुदंवं

मर्भावाना पाण्डवार्थ निविष्टम्।

यस्येमां गां विक्रममेकमा अः

तदा नामंने विक्याय मञ्जय।

यदात्री वं जूडमभेदामन्त्री-

भारद्वाजेनात्त्रम् मेन ग्रम्।

भिसा माभइ बारमेक प्रविष्ट

तदा न। शंभे विजयाय सम्रयः।।

9. Give the roots of चर्चायानं, गंग्रितं, and their third person plural present tense.

- 10. What samása is it in चानगरेक ? Resolve it and give its meaning.
- 11. What would be the meaning of the word हर्मात भिका, as a karmadháraya samása, what as a tatpurusha and what as a bahuvrihi?

# LATIN POETRY.

# Examiner.—MR. J. SIME, B. A.

- 1. Refer to any peculiarity in the declension of—insidiæ, manes, sol, metus, locus, avis, apis, epulum; mark the gender of these substantives, and tell the quntity of words ending in—as, es, is, os, us.
- 2. Explain the meaning of the words—immo, ceterum verum, quippe, statim, repente, temere admodum, secundum; and distinguish between alter and alius, uterque, quisque and ambo, nostrum and nostri, plerique and plurimi, lex, jus and fas.
- 3. What moods are generally found after quum (when), quum (since), priusquam, donec, quasi, quamvis, simul ac? Translate into Latin:—"Virgil died before he completed his Æneid," and "Hannibal, when he had once deceived Varro, began to hope."
- 4. Give the dates of the birth and death of Horace, and tell what particulars you have gathered from your reading of his life.
  - Translate accurately:—
     Pindarum quisquis studet æmulari,
     Jule, ceratis ope Dædalea
     Nititur pennis vitreo daturus
     Nomina ponto.

Monte decurrens velut amnis imbres Quem super notas aluere ripas, Fervet immensusque ruit profundo Pindarus ore,

Laurea donandus Apollinari, Seu per audaces nova dithyrambos Verba devolvit numerisque fertur

Lege solutis;

Seu deos regesve canit deorum Sanguinem per quos cecidere justa Morte Centauri, cecidit tremendæ

Flamma Chimæræ;
Sive quos Elea domum reducit
Palma cælestes pugilemve equumve
Dicit et centum potiore signis

Munere donat;

Flebili sponsæ juvenemve raptum Plorat et vires animumque moresque Aureos educit in astra nigroque Invidet Orco.

To whom was this Ode addressed?

- 6. (a) Explain any peculiarily in "daturus nomina," "vitreo ponto," "laurea Apollinari," "equumve."
- (b) Name the classes of Pindar's poetry referred to in vv. 10—24.
- 7. What is the metre of this Ode? Name the only feet admitted into a Sapphic line by Horace. When may the fifth syllable be a monosyllabic word?
  - Translate accurately:—
     Atqui si vitiis mediocribus ac mea paucis
     Mendosa est natura alioqui recta, velut si

Egregio inspersos reprehendas corpore nævos;
Si neque avaritiam neque sordes aut mala lustra
Objiciet vere quisquam mihi, purus et insons
(Ut me collaudem) si et vivo carus amicis;
Causa fuit pater his, qui macro pauper agello
Noluit in Flavi ludum me mittere, magni
Quo pueri magnis e centurionibus orti,
Lævo suspensi loculos tabulamque lacerto,
Ibant octonis referentes Idibus æra:
Sed puerum est ausus Romam portare docendum
Artes quas doceat quivis eques atque senator
Semet prognatos.

# Derive Satira.

- 9. (a) Account for the mood of "reprehendas," and explain the phrase "ibant octonis Idibus."
- (b) Give the meaning of era, tabula. What was the office of a præco; what that of a coactor?
  - (c) Point to any peculiarity in-

Atque alii quorum comædia prisca virorum est.

- '(d) Explain the construction of—

  Multi vivunt quasi semper victuri sint.

  Nulla res memorari potest quæ insignior fuerit.

  Macte virtute, discipuli, este!
- 10. Give the derivation of vesta, delubrum, ævum, olim, curia, torvus.

# LATIN PROSE.

Examiner.—REV. L. VEYS.

T.

# 1. Translate:—

At enim vir clarissimus, amantissimus reipublicæ, vestris beneficiis amplisssimis affectus, Q. Catulus: itemque summis ornamentis honoris, fortunæ, virtutis, ingenii præditus, Q. Hortensius, ab hac ratione dissentiunt: quorum ego auctoritatem apud vos multis locis plurimum valuisse, et valere oportere confiteor: sed in hac causa, tametsi cognoscitis auctoritates contrarias fortissimorum virorum et clarissimorum, tamen omissis auctoritatibus, ipsa re et ratione exquirere possumus veritatem; atque hoc facilius, quod ea omnia, quæ adhuc a me dicta sunt, iidem isti vera esse concedunt, et necessarium bellum esse et magnum, et in uno Cn. Pompeio summa esse omnia. Quid igitur ait Hortensius? si uni omnia tribuenda sunt, unum dignissimum esse Pompeium: sed ad unum tamen omnia deferri non oportere. Obsolevit jam ista oratio, re multo magis quam verbis refutata.

- 2. Parse the words amantissimus, affectus, dissentiunt, confiteor, deferri.
- 3. Who were Cn. Pompey, L. Lucullus, Q. Catulus, and Q. Hortensius?
- 4. State the difference between amans rempublicam and amans reipublica.
- 5. Point out all the substantives in the ablative case from at enim vir to clarissimorum, and gives the reason why they are in that case.

6. What is an infinitive sentence, and illustrate your answer by an example from the above passage.

II.

#### 1. Translate:

Hæc est nobilis ad Trasimenum pugna, atque inter paucas memorata populi Romani clades. Quindecim millia Romanorum in acie cæsa sunt; decem millia, sparsa fuga per omnem Etruriam, diversis itineribus urbem petiere. Mille quingenti hostium in acie, multi postea utrinque ex vulneribus periere. Multiplex cædes utrinque facta traditur ab aliis.

- 2. Give two synonyms of each of the following words: pugna, acies, urbs, cædes, iter, and explain the differences.
  - 3. Decline mille quingenti and quindecim millia.
- 4. What are the principal parts of casa, sparsa, petiere, periere, and traditur?
  - 5. Give a brief account of the battle at Trasimenus.

#### III.

Translate into Latin :-

Pardon those who have offended thee, and take care to make friends of enemies by kindness and good conduct. Govern thy tongue and passion when thou art angry with any one: anger will hurt thee more than injury.

## ARABIC.

Examiner.-MR. H. BLOCHMANN, M. A.

1. Translate—Abu Bakr 'said, Are you all of this opinion?—Art thou really Yúsuf?—Is it Zaid or 'Amr?—Is he Zaid or 'Amr?—Whose daughter art thou?—The king's sons and daughters. The people stood up with

the exception ( $\tilde{y}$ ) of Zaid—If thou sayest this, thou art one of the unbelievers.

- 2. Al Qazwini speaks of three kingdoms (مواليد ) of nature. Name them. What rank do quicksilver and sulphur occupy in the formation and composition of minerals? Explain the action of the sun during the process of formation, and the terms غطبخ and خطبخ.
  - 3. Translate-

زرافة رأسها كرأس الابل و قرنها كقرن البقر و جلدها كجلد النمر و قوائمها كباللبعير و إظلافها كماللبقر طويلة العنق جدا طويلة اليدبن قصيرة الرجلين و صورتها بالبعير اقرب و جلدها لببر اشبة و ذنبها كذبب الظباء قالوا الزرافة متولدة من ناقة ا عبشة و البقرة الوحشية و الضبعان و ذلك ان الصبعان ببلاد الحبشة يسفد الناقة فتحي بولد بين خلفة الناقة و الضبعان فان كان واد تلك الناقة ذكرا ولحق بالمهاة اتت بالزرافة و حكى طيمات الحكيم ان بجانب الجنوب بقرب بالمهاة التناوء على مصاع خط الاستواء بالصيف تجتمع حيوانات صخيلفة الانواع على مصاع الماء من شدة العطش فريما سعدت غير انواعها فيتولد منه منل الرافة و السعع و العسبار و امتالها ه

- 5. Explain the difference between of and ol.
- 6 The particle 4 may be followed by the Nominative or Accusative. State the rule.

Translate—O man! O you good man! O Abraham, the friend of God!

7. Translate and write out the following passage with the vowel-points—

يا معشر البسليين قوموا لا تعذلوني ولا بلوموا عدى من السالحات علم سبحت فيه بل العلوم الفلك المستدير مقف و هو بارجائه يحوم.

يدركة ناظر بصير و خاطر عاطر سليم اما ترى الاختلاف فيه و الدورفي الحد مستقيم

- 8. What orthographical peculiarities are noticeable in مسؤل , أمرأة , إبن , عمرو
- 9. Translate—The Tartars gave way on all sides and were driven with a great slaughter from the field of battle. Elik Khan escaped across the Oxus with a few attendants, and never attempted again to oppose Mahmud. The Sultan was at first inclined to pursue the enemy; but the approach of the winter compelled him to abandon this design.
  - 10. Translate-
- زيادة القول تحكى الدقص في العمل و معطق الموءقد يهديه للزلل .
  - ان اللسان صغير جرمه و له جرم كبير كماقده قيل في المدل .
  - فكم بدمت على ما كذت قلت به وما بدمت علىما لمنكن تقل
  - واصيق الاعر امر لم تجد معه فتى يعينك أو يهديك للسبل و

#### ARABIC.

Examiner. - MR H. BLOCHMANN, M. A.

Translate-

قيل رئى ليلة ولد كان شيئا شبيه الخوذة تراءى طائرا في عدان الجو ثم سقط لى فضاء الدو ثم اببث عى الارعى و التشر و تطابر منه مثل الجمر و لشرر و تراكم حتى ملا البدو و الحضر و قيل لها سفط الى الارض ذلك السفيط كانت كفاه معلوتين من الدم العبيط فسالوا عن احواله الزواجر و القافة و تقحصوا عن تاويل ذلك من الكهنة و اعلى العيافة فعال بعضهم يكون شرطيا و قال بعضى بنشا لصاحراميا وقال قوم بل قصابا صفاكا وقال آخرون بل صيرجلاد ابتاكا .

2. Explain—
 ذوالقريين وفرعون وشداد والدرينجان والمسجد الاقصى باوهاشم
 المامون واسط والممالقة والعطاب

- 3. Inflect the Perfect, Future and Imperative of he promised.
  - 4. Translate—
- و بينها هو قد استولى على كوسى الهند و امصارة واحتوى على ممالكة و اقطارة و بلغت مراسيمة اعماق انجادة و اعرازة و البت جيشة في ولاياتها سهالا و ورعا و ظهر فسادهم في رعاياها بوا ولحرا اذ وقد عليه المبشر من جانب الشام ان القامى برهان الدين احمد السيواسي و الملك الطاهر انا سعيد برقوق انتقلا الى دار الاسلام وكاد ان يطير الى جهة الشام من الفرح فنجز سرعة امور الهند ونقل الى مملكنه من فيها من العساكر والجدد نها اخدة مى الانقال و نفائس الاموال ووزع ذلك الجمهور من ذلك الجدد الماسور على اطراف ما وراء الدهر من الحدود و الثعور ه
- 5. Explain the meaning of کان when joined with the perfect (ماضی) and when joined with the future of any verb. Explain the construction ضرب ضرب ضرب (What force lies in the indefinite (تنکیر) form
- 6. What is the meaning of the form (باب ) و تعمّل ( باب ) Explain this by the following examples تبرد و بنبر و بنبر و بنبر و بنبر و بنبات . What is the usage of the forms إنمن و إنمال . و إنمال ؟
- 7. Form the plurals of اسير, جزيرة, اسيخ, خطية أسيخ, مفارة شيخ, خطية المسيخ, المنسخ, المسيخ and عفيف مبور وقبيل e. g., فعول وعفول و. g., فعول
- 8. Enumerate the particles which take in Arabic the subjunctive ( مضارع منصرب ). Translate—Pardon me, O my Lord, so that I may enter Paradise!
  - 9. Translate-
- حدثنى الملك امام الدين يعيى بن الأفتخارى رحمة المة قال اذكر و لعن بقزوين اذا جاء أليل جعلها جميع لمالنا من آناث و قماش و رحل في سراديب لدا في دوريا عامضة خفية ولا يترك على وجه لارض شيئا خوما من اكتساب الملاحدة فادا اصبحنا اخرجنا اقمشتنا عادا جاء الليل فعلنا كدك • •

Explain الملاحدة, سراديب, and write out this passage with the vowel-points.

10. Mention the cases when the apodosis ( جزاء ) of a conditional sentence ( الجملة الشرطية ) requires the particle

#### HISTORY.

#### Examiner.—MR. R. HAND.

- 1. Sketch the history of the Danes in England from A. D. 866 to 1016.
- 2. Describe very briefly the following battles, giving their dates:—The Standard, Stirling, Bannockburn, Halidon Hill, Neville's Cross, Flodden.
- 3. "Thus was wrested from him that famous statute, im dequately denominated the Confirmation of the Charters, because it added another pillar to our constitution, not less important than the Great Charter itself."

Detail the history of this event; and explain why Hallam says its title inadequately describes this Charter.

- 4. Under what circumstances was popular representation introduced into the English constitution; and from what period have the delegates of the people been regularly summoned to Parliament?
- 5. When and how was Calais acquired and lost by the English?
- 6. Compare the rival claims of the Houses of York and Lancaster. What compromise was proposed by the House of Peers? Name in chronological order the most important battles of the Civil War. Show how these contending interests were ultimately reconciled.

- 7. Give a succinct account, with dates, of the following:—The Pilgrimage of Grace; Wyatt's Conspiracy; Babington's Conspiracy. What tragic event was immediately brought about by the last of these, and under what special legislation?
- 8. Narrate the events that brought Robert Devereux, Earl of Essex, to the block.

#### HISTORY.

#### Examiner.—REV. W. C. FYFE.

- 1. By what title did James I. succeed to the crown of England? What were the causes and objects of the Gunpowder Plot? What political and religious spirit begins to be manifest in James's reign?
- 2. Give the dates of the birth, accession, captivity, and execution of Charles I. Describe his character; and support your view by reference to his public acts. Distinguish between the "Petition of Right" and the "Bill of Rights."
- 3. What was the character of Cromwell's home administration? What was his foreign policy? How was the restoration of Charles II. brought about?
- 4. Enumerate, with dates, some of the most remarkable events during the reigns of Charles II. and James II. Mention the most prominent of their persecuting statutes. State the tenor of the Habeas Corpus Act, and explain its efficacy in favour of liberty.
- 5. What were the causes of the Revolution of 1688? Mention any great political changes which may have been made in the Home Government since 1688.

- 6. Sketch briefly the chief incidents in the war of the Spanish Succession, and state the results as regards Britain. State very briefly the chief arguments for and against the treaty of Utrecht.
- 7. Give a list of the principal colonies and dependencies of the British Empire, define the geographical position of each, and state when and how each of them was acquired.
- 8. Give a short account and criticism of the impeachment of Warren Hastings.
- 9. Where are the following places:—Blenheim, Culloden, Dettingen, Killiecrankie, Leipsic, Naseby, Talavera, and Waterloo? Give the dates of the battles fought at or near these places, and name in each case the victorious party.
  - X. Give a brief outline of the progress of the British nation since the beginning of the reign of George III.

## EUCLID, ARITHMETIC, AND ALGEBRA.

Examiner.-Mr. M. H. L. BEEBEE, B. A.

- 1. To a given straight line apply a parallelogram, having an angle equal to a given rectilineal angle, which shall be equal to a given rectilineal figure.
- 2. In any quadrilateral inscribed in a circle, any two opposite angles are together equal to two right angles.

A C B is a right angled triangle, having its right angle at C.

In A B any point D is taken, and D F E drawn perpendicular to A B, cutting A C, B C in F, and E. Prove

by means of the first three books of Euclid only that the rectangle contained by A F and E C equals that contained by E F and A D.

- 3. Similar triangles are to one another in the duplicate ratio of their homologous sides.
- 4. Draw a perpendicular upon a plane from any · point without it.

Defining a sphere as a surface every point of which is equally distant from a point within it, called the centre, show that every plane section of a sphere is a circle.

- 5. The length of the Eastern Bengal railway being 110 miles, and the capital employed in its construction 1,500,000/., what must be the gross annual traffic receipts per mile in order that a dividend of 5 per cent. may be paid to the shareholders, after allowing 45 per cent, of the gross receipts for current expenditure?
- 6. Write down the roots of the equation  $9x^2 + 15x$ -14 = 0.

Solve the following:

(1) 
$$\frac{x+2a}{x-2i} = \begin{pmatrix} x+a\\ x-b \end{pmatrix}^{2}$$
(2) 
$$x^{2} + xy = a^{2}\\ y^{2} \div xy = b^{2}$$

$$(2) \quad \begin{cases} x^2 + xy = a^2 \\ y^2 \div xy = b^2 \end{cases}$$

7. Solve the equations:

$$\begin{array}{l} a_1 x + b_1 y + c_1 z = d^1 \\ a_2 x + b_2 y + c_2 z = d^2 \\ a_3 x + b_3 y + c_3 z = d_3 \end{array}$$

and eliminate the unknowns when  $d_1 = d_2 = d_3 = 0$ .

8. A number has three digits, the sum of which equals 10; the first and third exceed the second by 4, and the first and second exceed the third by 8. Find the number.

- 9. Show how to sum a series in A P, and insert three harmonic means between 4 and 2.
- 10. If  $(x^2 y^2)^2 = (y^2 z^2)^2 x$  show that x is to z in the duplicate ratio of x to y.
- 11. Find the number of Permutations of n things all together, whereof p are the same, q the same, r the same, and so on:  $p + q + r + \dots$  being less than n.

How many diagonals can be drawn in a figure of n straight lines as sides.

12. Expand the series  $(1 + x + x^2)^{-3}$  to the fourth power of x inclusive, and extract the cube root of 1.03 to four places of decimals by the aid of the Binomial Theorem.

# TRIGONOMETRY, LOGARITHMS, AND STATICS.

## Examiner.—MR. E. WILLMOT, B. A.

- 1. Define the tangent of an angle; define also the circular measure of an angle; and find a rule for the reduction of degrees to circular measure, and vice versá. Find the circular measure of  $\pi^{\circ}$ , and express in degrees the angle whose circular measure is 180.
- 2. Find sin 18; and deduce the values of sin 9° and cos 9°, carefully explaining your reasons for taking particular signs with the radicals.
- 3. Explain the advantages in practice of common logarithms over logarithms to any other base. Enuntiate the principle of Proportional Parts: find the L. sin, L. cos, and L. tan of 44° 11′ 37.2″, given

L. 
$$\sin 44^{\circ} 11' 40'' = 9.8432923$$
  
L.  $\sin 44^{\circ} 11' 30'' = 9.8432707$ 

and

L.  $\cos 44^{\circ} 11' 40'' = 9.8555060$ L.  $\cos 44^{\circ} 11' 30'' = 9.8555264$ 

4. Find an expression for the area of a triangle in terms of the sides.

If the area of a triangle be 6 square miles, and two sides be 3 and 5 miles respectively; find the other side.

5 Solve fully  $\tan p \theta = \cot q \theta$ ; and show from your result that the solutions of  $\tan 5 \theta = \cot 3 \theta$  and  $\tan 6 \theta = \cot 2 \theta$  are the same.

Solve also  $\sin^{-1}x = \cos^{-1}(\sqrt{2}-x)$ .

- 6. Enuntiate the parallelogram of forces; and prove it as far as the direction of the resultant is concerned.
- 7. Show that the centre of gravity of a plane triangular lamina coincides with that of three equal particles placed at the angular points.

Weights are placed at the angles, of a triangle and are proportional to the sides respectively opposite: prove that their centre of gravity is at the centre of the inscribed circle.

8. An object weighed in one scale of a false balance (whose arms are unequal) appears to weigh W<sub>1</sub>, and weighed in the other it appears to weigh W<sub>2</sub>, Find its actual weight, W; and show that the weight of each scale-pan (w) is given by

$$w = \frac{W^{3} - W_{1}W_{2}}{W_{1} + W_{2} - 2W_{1}}$$

8. A certain endless string passing over a fixed pulley is found just strong enough to support another pulley

of equal radius, when the portions of the string between the pulleys are parallel; show that it will break if the portions of the string cross each other.

#### MENTAL PHILOSOPHY.

Examiner.-MR. A. W. CROFT, M. A.

- 1. What is meant by "Phenomenon?" Point out the difference between the "Law" and the "Cause" of a Phenomenon, with illustrations from some Natural Science.
- 2. Explain the connexion and the difference between Science and Art. What are the arts corresponding to anatomy, astronomy, astronomy, asthetics; and on what sciences are based the arts of medicine, education, architecture?
- 3. What is the ground of the distinction between certain and uncertain sciences? Of uncertain sciences, show that some are and must be uncertain from their own nature, and that others are accidentally uncertain from the imperfection of human knowledge. Explain the use of Statistics in getting rid of this uncertainty.
- 4. Distinguish between the knowledge given us by Perception and by Reflection. What is the difference between primary and secondary qualities of body?
- 5. Give reasons for the statement, that the immediate object of vision is colour only; and show how we are able to judge of the magnitude and distance of objects.
- 6. What is the Association of Ideas? What different connexions may exist between associated ideas? Explain

the term "Train of Thought," and invent an example, showing how in a few steps one thought may suggest another with which it has no apparent connexion.

- 7. What is a syllogism? Whence are its premises obtained? Throw the following argument into the form of successive syllogisms:—" Brutes, not having intellect, and therefore having no knowledge of right and wrong, cannot be morally responsible: hence they should not be punished."
- 8. What is a Fallacy? Distinguish it from a Falsehood; and give examples of the fallacies of arguing in a circle, analogy, division, and ambiguous terms.

Explain the following:—Abstraction, Conception, Imagination, Perception by Images, First Truths, Habit, Induction.

## MORAL SCIENCE.—ABERCROMBIE.

Examiner.-MR. GEORGE SMITH.

- 1. What are the principal theories of morals, and by whom have they been formed? To what two classes may all be reduced?
- 2. Where are we to look for a uniform moral standard? How do you account for the diversities of opinion regarding moral truth and practice? Prove the immutability of moral distinctions.
- 3. Define emotions, desire, and will, and show their relation to conscience.
- 4. State and illustrate the influence on moral action of habit, attention, and sympathy.

#### B. A. EXAMINATION.

- 5. Define and distinguish from each other—
  - (a) Self-love.
  - (b) Self-approbation.
  - (c) Selfishness.
- 6. Estimate the moral value of faith.
- 7. What are the elements of veracity? What is the relation of veracity to candour and sincerity?
  - 8. State the principal moral arguments for-
    - (a) The existence and character of God.
    - (b) The immortality of the soul.

## B. A. Examination, 1868.

## ENGLISH POETRY.

Examiner.-MR. C. H. TAWNEY, M. A.

- 1. Explain the following passages:-
- (a) Edmund, seek him out: wind me into him, I pray you: frame the business after your own wisdom, I would unstate myself to be in a due resolution.
  - (b) Have more than thou showest,
    Speak more than thou knowest,
    Lend less than thou owest,
    Ride more than thou goest,
    Learn more than thou trowest,
    Set less than thou throwest.
- (c) We'll set thee to school to an ant, to teach thee there is no labouring in the winter.

- (d) Sleepest thou, or wakest thou, jolly shepherd?Thy sheep be in the corn:And for one blast of thy minikin mouth,Thy sheep shall take no harm.
- (e) What, art mad? A man may see how this world goes with no eyes. Look with thine ears; see how yond justice rails upon yond simple thief. Hark in thine ear: change places: and handy-dandy, which is the justice, which is the thief?
  - These weeds are memories of those worser hours:
    I prithee, put them off.
- 2. Write short grammatical notes upon the italicized words in the following passages:—
  - (a) The hedge-sparrow fed the cuckoo so long, That it's had it head bit off by it young.
  - (b) those happy smilets
    That played on her ripe lip.
  - (c) To lay the blame upon her own despair.

    That she fordid herself.
- (d) Woe worth the chase, we worth the day.
- (e) An chud ha' been swaggered out of my life, 'twould not have been zo long as 'tis by a vort night.

Give the derivations of the words treachcrous and menial.

3. Give some account of the author from one of whose works the Art of Poetry is a translation? Who executed the principal part of the translation? What do you think of the Canons of Dramatic Criticism laid down in it?

- 4. Paraphrase (with brief notes):-
- (a) Chapman in Bussy D'Ambois took delight,And thought perfection was to huff and fight.
- (b) To banish Tritons, who the seas invade,
  To take Pan's whistle, or the Fates degrade,
  To hinder Charon in his leaky boat
  To pass the shepherd with the man of note,
  Is with vain scruples to disturb your mind.
  - (c) Up Urgan starts, that hideous dwarf,
    Before Lord Richard stands,
    And, as he crossed and blest himself,
    I fear not sign, quoth the grisly elf,
    That is made with bloody hands.
  - (d) Bearing before them in their course
    The relics of the archer force,
    Like wave with crest of sparkling foam,
    Right onward did Clan-Alpine come.
    Above the tide, each broadsword bright
    Was brandishing like beam of light,
    Each targe was dark below;
    And with the ocean's mighty swing
    When heaving to the tempest's wing,
    They hurled them on the foe.
- 5. What is the historical basis of the Lady of the Lake? In what sense can poetry be said to be truer than history?
- 6. Construct a glossary of the following words:—cumber, mavis, vair, to beshrew, kibe, tike, walking fire.
  - 7. Illustrate the following passages by quotations:—
  - (a) Bless thee from taking.
  - (b) Why this would make a man, a man of salt.

# (c) O our lives' sweetness! That with the pain of death we'd hourly die.

8. From what sources did Shakspeare derive the story. of King Lear? With what play of the classical school may it be compared?

# ENGLISH PROSE.

## Examiner.—REV. F. R. VALLINGS, B. A.

- 1. Explain the sense in which "goodness of nature" is used by Bacon. How does the modern sense differ from it? Distinguish between good nature and good humour. Give the origin of the latter phrase. What is the difference between Bacon's use of the words wit, convince, fearful, plantations, sensual, conscience, politics, ceremonies, respects, and the present use of them?
- 2. Write explanatory notes on the following passages, specify differences of idiom or meaning between Bacon's usage and the present usage, and elucidate grammatical difficulties:—
- (a) It is the solecism of power to think to command, and yet not to endure the mean.
- (b) Suspicions among thoughts are like bats among birds,—they ever fly by twilight. They are defects not in the heart but in the brain, for they take place in the stoutest natures, as in the instance of Henry VII. of England. There was not a more suspicious man, nor a more strait, and in such a composition they do small hurt.
- (c) That which he wins in the hundred he loseth in the shire.

- (d) To be master of the sea is an abridgement of a monarchy.
- (e) Nero could touch and tune the harp well, but in government sometimes he used to wind the pins too high, sometimes to let them down too low.
- (1) With bold men they stand at a stay, like a stale at chess.
- (g) Prosperity is the blessing of the Old Testament, adversity of the New.
- (h) The stage is more beholding to love than the life of man.
- (i) Wives are young men's mistresses, companions for middle age, and old men's nurses, so as a man may have a quarrel to marry when he will.
  - (k) When a man pretends to be that he is not.
- (1) There is a toy which I have heard, and I would not have it given over, but waited upon a little.
- (m) The mind is but an accident to knowledge, for knowledge is a double of that which is. The truth of being and of knowing is all one.
- (n) You were better take for business a man somewhat absurd than over formal.
  - (p) He was fain to do all things for himself.
- 3. Name the three violations of perspicuity as described by Campbell, with their sub-divisions.
- 4. What is the difference between the explicative and the determinative or restrictive uses of the relative? Give an instance of each. How is the definite article useful for discriminating between them? In which way is that generally used?
  - 5. Had I but served my God with half the zeal I served

my king, he would not in mine age have left me naked to mine enemies. How does Campbell defend the use of the word he?

- 6. "You shall seldom find a dull fellow of good education but (if he happen to have any leisure upon his hands) will turn his head to one of these two amusements for all fools of eminence, politics or poetry." Give full notes on the grammatical construction of this sentence. Rewrite it according to the present mode of expression.
- 7. Give a short account of the political and social condition of Rome during the youth of Rienzi, and sketch the causes of his rise to power.
  - 8. Name some characteristics of the style of Gibbon.
- 9. Mention six affixes denoting nouns of Saxon origin, and six of Latin; give the meanings of each, and an example.
- 10. Explain fully the uses of the verbal noun, or gerundial infinitive in ing. Give examples.

#### LATIN POETRY.

## Examiner.—MR. J. SIME, B. A.

- 1. Explain rhythm, cæsura, hiatus, elision. What is the most natural cæsura in heroic verse? What is the cæsura  $i\phi\theta\eta\mu\mu\mu\rho\dot{\eta}s$ ? what a versus spondaicus? Give examples.
- 2. What generally is the length of a vowel before j? What is the effect of a monosyllabic word at the end of a verse? Write down the names of these feet: omnis miles, domine, dolores, fortis, lege, improbus.

3, Mention the subject of each book of the Georgics. With what object is it probable that Virgil wrote this poem? Whence did he derive his materials?

#### 4. Translate-

Frigidus agricolam si quando continet imber, Multa, forent quæ mox cælo properanda sereno, Maturare datur: durum procudit arator Vomeris obtunsi dentem : cavat arbore lintres; Aut pecori signum aut numeros inpressit acervis. Exacuunt alii vallos furcasque bicornis, Atque Amerina parant lentæ retinacula viti. Nunc facilis rubea texatur fiscina virga; Nunc torrete igni fruges, nunc frangite saxo. Quippe etiam festis quædam exercere diebus Fas et iura sinunt: rivos deducere nulla Religio vetuit, segeti prætendere sæpem, Insidias avibus moliri, incendere vepres, Balantumque gregem fluvio mersare salubri. Supe oleo tardi costas agitator aselli Vilibus aut onerat pomis; lapidemque revertens Incusum aut atræ massam picis urbe reportat.

- 5. (a) Explain the meaning of "frigidus imber," "lintres," "furcæ," "religio," "rivos deducere," "lapidem incusum."
- (4) Refer, with explanatory notes, to any mythic allusions in this book.
- 6. Give the dates of the birth and death of Juvenal; characterize the times in which he lived, and the tendency and style of his satires.

What is the proper meaning of Satira?

## 7. (a) Translate—

Cedamus patria: vivant Artorius istic Et Catulus: maneantqui nigrum in candida vertunt, Quis facile est ædem conducere, flumina portus, Siccandam eluviem, portandum ad busta cadaver, Et præbere caput domina venale sub hasta.

Explain conducere, and v. 5.

## (4) Translate—

Nam quæ meritoria somnum

Admittuut? Magnis opibus dormitur in Urbe.
Inde caput morbi. Rhedarum transitus arto
Vicorum inflexu et stantis convicia mandræ
Eripient somnum Druso vitulisque marinis.
Explain meritoria and mandra. "Druso,"—who is
supposed to be alluded to?

## S. (a) Translate—

Ancilla natus trabeam et diadema Quirini
Et fasces meruit, regum ultimus ille bonorum.
Prohibita laxabant portarum claustra tyrannis
Exsulibus juvenes ipsius Consulis et quos
Magnum aliquid dubia pro libertate deceret,
Quod miraretur cum Coclite Mucius et quae
Imperii fines Tiberinum virgo natavit.
Occulta ad Patres produxit crimina servus,
Matronis lugendus: at illos verbera justis
Afficiunt pænis et legum prima securis.
Explain the allusions of this passage.

## (b) Translate-

"Vivite contenti casulis et collibus istis, O pueri," Marsus dicebat et Hernicus olim Vestinusque senex; "panem quæramus aratro Qui satis est mensis: laudant hoc numina ruris Quorum ope et auxilio gratæ post munus aristæ Contingunt homini veteris fastidia quercus. Nil vetitum fecisse volet quem non pudet alto Per glaciem perone tegi, qui summovet Euros Pellibus inversis. Peregrina ignotaque nobis Ad scelus atquenefas, quæcunque est, purpura ducit."

Explain the construction of this passage. Who were the Marsi? who the Hernici?

- 9. Give the precise meanings, and, as far as you can the etymologies of—bustum, frumentum, galerus, lacerta, exodium, coram, securis, and calamitas. In what sense does Juvenal use "sensus communis?" How does Horace use it?
  - 10. Translate in Latin Hexameters-

O Father! gracious was that word which closed Thy sovran sentence, that man should find grace; For which both Heaven and Earth shall high extol Thy praises with the innumerable sound Of hymns and sacred songs, wherewith thy throne Encompassed shall resound thee ever blest.

## LATIN PROSE.

## Examiner.—REV. L. VEYS.

## 1. Translate:-

Cæsar paulisper ad spem erectus, dein fesso corpore, ubi finis aderat, adsistentes amicos in hunc modum adloquitur:

"Si fato concederem, justus mihi dolor etiam adversus Deos esset, quod me parentibus, liberis, patriæ, intra

inventam, præmaturo exitu raperent: nunc scelere Pisonis et Plancinæ interceptus, ultimas preces pectoribus vestris relinquo: referatis patri ac fratri, quibus acerbitatibus dilaceratus, quibus insdiis circumventus, miserrimam vitam pessima morte finierim. Si quos spes meæ, quos propinquus sanguis, etiam quos invidia erga viventem movebat, illacrymabunt quondam florentem, et tot bellorum superstitem muliebri frande cecidisse. Erit vobis locus querendi apud senatum, invocandi leges. Non hoc præcipuum amicorum munus est prosequi defunctum ignavo questu; sed quæ voluerit meminisse, quæ mandaverit exsequi. Flebunt Germanicum etiam ignoti, vindicabitis vos, si me potius quam fortunam meam fovebatis. Ostendite populo Romano Divi Augusti neptem, camdemque conjugem meam; numerate sex liberos. Misericordia cum accusantibus crit; fingentibusque scelesta mandata esse, aut non credent homines, aut non ignoscent. Juravere amici dextram morientis contingentes, " spiritum ante quam ultionem amissuros."

- 2. Give an analysis of this speech. State under what circumstances it was pronounced. Who were Piso, Plancina, Germanicus?
- 3. Explain the following datives and ablatives; fato, parentibus, muliehri, vohis, fingentibus.
- 4. Discriminate between the following synonymes scelus, crimen, facinus, flagitium. Sanguis, cruor, sanies. Populus, plebs, vulgus.
  - 5. Translate:-

Quartam causam esse (dicit), eamque vel maximam, requabilitatem motus, conversionem cæli; solis, lunæ, side

भाग्न भाशी; उथितिन उरम कनकरन, स्था॰ खेद अ॰ खेम्भार्ग घथा अध्वाणि।

What is the etymology of farm, and what the meaning of the last line?

4. মেলি জাঁথি, শশীমুথি, দেথিত্ব সমূথে রাবণে; স্থতলে, হায়, সে বীর্কেশরী, তুল্ল শৈলগুল যেন চূর্ণ বজাঘাতে!

Give the etymology of শশী and কেশরী, and the meaning of the last line.

5. দরিন্দ্র, পাইলে রতন, কছু কি তারে অ্যতনে, ধনি ?

6. Parse অযভনে.

**जिल्लाम अर्थे अर्थ किला सम्मर्थ ।** 

Give the meaning and etymology of স্রীস্রী.

ভীমবাছ! কার সা
 ॥ বিম্থিবে তারে?
 ভাবি দেথ, হরনাথ, কহিছ যে কথা।
 উত্তরিলা শচীকান্ত নম্চিত্রদেন।।

Give the samása of ভীমবাছ and শচীকান্ত. Would these words admit any other samása? What would be their meaning then?

- 8. Why is the first syllable long in নীরব but short in নিরম্ভ?
- 9. Paraphrase the following lines in Bengali, using as far as you can words different from the text.

উত্তরিলা ভীমারপী; "বীরশ্রেষ্ট তুমি, রুষুমাথ; আসি যন্ত্র কর তাঁর সাথে; মনুবা ছাড়ছ পথ; পশিবে রূপসী, অর্থনান্ধারে আজি প্রজিতে পতিরে बरध्य जात्मक वृक्तः निक्त युक्त वरणः वरकावध्र मारण वर्षः (सर्व वर्ष जादव, वीदवळा। व्रमणी मंख स्मावाः मार्ट हार, विश्व प्रमावाः कर्षा वर्षः, वर्ष्णः वर्षः, वर्षः वर्षः, वर्षः वर्षः, वर्षः वर्षः वर्षः, वर्षः वर्षः वर्षः, वर्षः वर्षः वर्षः, वर्षः वर्षः वर्षः वर्षः, वर्षः 
- 10. Give as many synonymes as you can of—
  মন্ত্রণ, জল, রাজি, বায়ু, অধি, আকাশ,
- 11. Give the rule for the change of a into a.
- 12. State some of the peculiarities in the style of the Meghanádavadha Kávya.

#### BENGALI.

Examiner.—Pundit, Mohesh Chundra Nyaratna.

1. Point out and explain the অসম্ভার in the following passages:—

লোহিত-বসন-পরিচ্ছ ল শস্ত্রধারী বিকটমুর্ডি সাক্ষাৎ ক্তা-ভাৰতার সেপাহিরা অন্দিন প্রহার কার্ডে দখায়মান থাকে উভান তড়াগাদির শোভার অন্ত্রণ নন্দন কাননেরও ক্ষোভ ক্রয়া থাকে। রজনীতে দাপের ছটায় কুম্দিনী নায়ক পর্ভত্ত মলিন হইয়া পড়েন এবং সুর্ট্যোদয় ভাবে নলিনীর বিকাশ ক্র। . . . বর ধর্ণন সামস্ত সমভিতাহারে রাজ ভবনে প্রবেশ ক্রিলেন তথ্ন . . . . বের হইল ধেন সক্ষা সাল- ভিতাহারে নিশাপতি স্বয়ং রাজধানীর শোভা দর্শনার্থ অব-তীর্ণ হইলেন অথবা যেন অশ্বিনী কুমার দ্বয়ের অন্তত্তর বিবিধ পেয়াত্মক সোমরুস পিপ্লাস্থ হইয়া রাজদ্বারে আইলেন।।

- .... হতেরা বিধাহ সমাল যেন দ্বিতীয় বিক্রমাদিতের সভা হইয়া উঠিল।
- 2. Define the following অলক্ষার: —দীপক, পুনরুক্তবদাভাদ, দমাদোকি, and অথান্তর্ন্যাদ.
- 3. Point out the compound words, explaining the সমাস of each in the following passages:—

প্রভাকরের পক্ষে কেবল দীর্ঘিকান্থ কমলোক্ষেষ যোগ তে-লোবিস্থার এবং প্রনের পক্ষে কেবল তালহন্ত গুজনোপ্যোগি বায়ু বহন এবং শীতোক্ষের অন্তন্তাভাব এই সকল কাত রসের উক্তি যদি বাস্তবিকী সন্তা প্রাপ্ত হয়, ... সুর্থের উন্তোপ দারা প্রথিবীর রস উর্দ্ধে আকর্ষিত না হইলে বর্ধার সম্ভব হয় না, বর্ধা অসম্ভব হইলে শতা সম্ভব হয় না।

- 4. Give the meaning of the following words:— উপরাগ, স্থৃতি, জাল্ম, রন্ম, আলান,
- 5. Give the etymological meaning of the words বিষ্ঠ্য নিকাণ, উনাদান, and আবিষ্ঠান. In what sense are they used by the Hindu philosophers?
- 6. Explain the expressions marked \*, and parse the words marked, +, in the following passages:—

... .. फटल (कवन स्टर्धरे खिन रेटा श्रीकात ना कवितन

ধগোলীয় বিবিধ ভাপার সিমান্তে কারণ গৌরব জল্ম। . . . .

শরীর এব॰ মনেতে যে প্রক্ষের বনমিত্তিক সম্বন্ধ তং প্রশ্নক তিনি ক্রিয়াবানু রূপে প্রতীয়মান হয়েন। . . . প্রস্তুক

# श्रमार्गत कथा श्रतिहात कतिरत स्वान श्रमागहे थारक ना (कमना

## অনুমানও প্ৰায়ক্ষ পূৰ্বক।

- 7. Write an essay in Bengali on the theory of the Creation according to the Sankhya and Vedanta, stating the arguments each brings forward against the other.
- 8. "Having obtained a victory over the Swedes and made himself master of Norway by expelling the good Saint Olaus from his kingdom, Canute seems to have obtained the height of his ambition, for from this period he appears not only to have relinquished all thoughts of future conquest, but to have despised all the glories and pleasures of the world, a necessary consequence of assigning to human enjoyments a satisfaction they cannot yield, and more especially of pursuing them (another effect of the same cause) at the expense of justice and humanity."

Translate the above passage into Bengali.

#### SANSCRIT.

Examiner.—Baboo Krishna Comul Bhutta B. A.

- १ । यत तिरयोनसमूबमारथः प्रसिद्धमूर्द्धव्यक्रमं दिव्यक्रिमा । पत्तत्वेषा भाग विश्वादि सर्व्यतः किसेतिह्त्याकुल्सोक्तितं जनैः ।। केलासामायमू दरव वियक्षितः । तस्य च तथासं कथमापतितिसती-दितिष्टमं संख्वतभाषया वर्षमीयस्।
  - १। पुरासयम्बन्द सुनोचि नन्दनं सुवाच रत्नानि चरासराङ्गनाः।
     विश्वत्र चन्ने ससुचिदिया नसी य प्रवस्तास्थ्यसद्दिशं दिवः।)

चक्की खयातानि न भर्तु रक्षेत्रोत्रे चित्रसृषैः श्रवसः पद ज्ञत्तरः । चनुष्ठतः संयति येन केवलं बल्लास्य मनुः प्रस्रसंस सीम्रतान् ॥ चम्ब्रुवन् सेव्हुनधीरको चनः सच्चरस्रोतित् यस्य दर्सनन्। प्रविक्रा चैनादिगुकाय चानारं निनाय विश्वदिवसानि कैशिकः।

इदं स्ने ाकवयं याष्ट्रोयम्। प्रयमे पद्ये भूतका स्वस्थले स्नोट्-विभिन्न प्रयोगः किमर्थं कविना कतः। कृतीये विभ्यत् इत्यव केन चेतुना न नुमागमः। दितीये यातपदं किस्मिन् वाचे कृतेन क्त-प्रत्ययेन सिध्यति वेदिकानां सीसागतिविधेषाः केचिद्यभाष्यपिदा एदा क्रियमाम्।

- श जान्यस्थाना जगतः शान्तये समुपेयुषी ।
   यस्तित्व सभावेद्यामसी नरशिवित्रयी ॥
   पिसन् स्नोके नयी सन्दे। वज्ञावारोप्यमाणे कर्य योजनीयः
   जबतः शान्तये इत्यस्य क्यम्भयनान्ययः सभवति ।
  - ४। जितिष्ठभानस् परे। ने।पेच्यः पय्यभिक्ता। धर्मे। चि मिष्टैरामाती वर्त्स्यनावामयः स च॥ न दूये चालतो छ मुर्थना द्यामपराध्यति। यमु द्रव्यक्षते से।क मदे। दुःख।करे।ति माम्॥ मम तावनातिमदं यूयतामक वामपि। ज्ञातसारों।पं चल्येकः सन्दिग्धे कार्य्यवस्तृति॥

रिभः स्रोतिर्यदिभिधोयते तदेव प्रकाराक्तरेणेच्यताम्। अतिष्ठमान इत्यव यत् शानच्यत्ययः प्रयुक्तकोन अत्-पूर्ध्यकस्य स्थाधाताः किक्यंवे-क्रच्यानायानं। स्कूर्याने इति यकक्तप्रयोगस्य का सार्थकता।

- ॥ । ये चान्ये काल यवन शाल्य दिका हुनादयः
   तमः सभावासिऽध्येनं प्रदेश मनुषायिकः ।।
   भाव के नाम श्रम्दाः खिद्या वर्षमौ सेवां दी दी चर्षा लिख्येताम्।
  - (। दिद्यमाकाः प्रतिरय्यमीयुर्मु रारिमाराद्वमं अनै।घाः ।
- चनकाः मंस्रुतसय्यमस्या मवं नवं प्रोतिरको करोति ।।
   दितीयाईसवस्य मंदिप्तः प्रवन्धे सिख्यताम्।
- श्री मृत्यास्य अक्षापरस्य कावस्य वायाक्या चनुस्ति-रिति कैसिन्दुचने, ननुपपादकमुभयोः किचिन् रचनासाम्यमुदादरः।
- यावत् च एव समयः सममेव तावत्
   चवाक्कसः पडमयानभिता वितत्य।

पर्यापतत्र त्रियक् लेकान माण्णुपप्पपूर्णपणा निपणिना निपणीर्विभेजुः॥
प्रकापणा निपणिना निपणीर्विभेजुः॥
प्रकापणा निपणिना निपणीर्विभेजुः॥
प्रकाणलेख्न मुद्दे तमनोक प्रजालकथात्
प्रन्यः भग्रं गुणमनस्पमवन्नवाप॥
स्रस्यः पयः पपुरमेनिजुरस्यराण्
ज्ञाविमं धनविकासिविसप्रस्नाः।
सैन्याः त्रियामनुपभागिन्दर्यकतः
देषप्रवादमस्जन्नगिनसगानाम्॥

स्रोकनयस्य दङ्गरेजोभाषयानुवादः करणीयः।

ः। चनुषुभा च्यन्दसा सम्धावर्णमाताको ऋखः प्रवन्ध एकः प्रकीयनात्

#### SANSCRIT.

Examiner.—Baboo Krishna Comul Bhuttacharjea, B. A.

१। मेा अपेष्ट वेदां चिद्रशानयत्य पिट्टनता प्रीत् मममंस बन्त्रत्। यज्ञ ए षड्डर्गमरंस नोता ममूस्त्रधातं न्यूवधीदरीं या। • यज्ञ यज्ञ-धाताः को अर्थः। पड्डर्गशब्देन किमुचतः। ईदशममासनि-

ष्पद्मानि दिवाणि पदान्युदाङ्कत्य तेषामधी जिल्लास्ताम्।

१। श्वात्मभरित्वं पिश्चितैर्नराणां फलेपडीन् इमि वनस्पतीनाम्
श्रीवस्तिकत्वं विभवान येशां क्रजनित सेषां दयमे न कस्पातः॥

कोडमं तत् मुनोनां व्रतं यद्व स्तीयपादे निर्दिष्टम्। मैविश्विक पद्मिद्विप्रकारः प्रदर्भाताम्।

- १। वस्तान्नपानं ग्रथमच नाना कत्वावकाग्रे बचिमंप्रक्राप्तम्।
   ताम् प्रोतिमानाच मुनिस्ततः स्त्र निवद्गमादं पिवताच ग्रेध्यम्।
   विसंप्रक्राप्तमित्यस्य कोऽर्थः। चतुर्थपाद्गता भातवे। निर्दिभानाम्।
  - ध । वनेषु वासतेयेषु निवसन् पर्णमंसरः।
     सथोत्यायं समान् विश्वक्षातियेथे। विचन्नसे।

पद्मिन्दं बाख्याय श्रयोत्थायस्त्रित समुख-प्रत्यवस्याम कुन शक्ति-स्नदुच्यताम्।

- प्रव वृद्धिं कुशायीयामनुकामीनमां त्यज ।
   स्वार्धी परम्परीणां लं पुत्रपेत्रोणमां नय ।।
   स्वाकार्थमवैयाकरणवाक्येन परिणमय ।
- १। त्रिप्रियामः परेणापि महिन्ना न महात्रमाम्।
  पूर्णसन्द्रो द्याकाङ्चो द्यानाऽत्र महार्णवः॥

चैत्र कोऽसद्भारः। तस्य किंसचणं। तच कथमव समाविश्ति।

२। विधाय वैरं सामर्थ नराऽरी य खदामते। प्रचिपोदर्बिषं कचे ग्रेरते तेऽभिमार तम्। चनत्यमसद्भारमुद्रीय तस्य भेदद्वयमुदाङ्कियताम्।

सस्विद्वाय सकलित्यमृत्याय राजकम्।
 क्या जातमजातारेः प्रथमेन लयारिणा।

चन यत् शिशुपालिजिद्यां स्वता यज्ञविद्रमृत्पाद्य युधिष्ठिरस् शत्रुताचरणं क्वतं भवेदित्युक्तं तिस्त्रद्वेशे कियदलक्कारा वक्ते न वा चित्र चेत् तर्षि तक्षचणादिकमृत्रिख्यताम्।

४। भोलितसामान्यतद्गुणानां द्वयार्दयाः को मिथाभेदः।

#### HINDI.

Examiner.—Baboo Krishna Comul Bhuttacharjea, B. A.

- 1. Explain the following fines:—
  निपटिच द्विज करि जानेक में छो। में जम निप्र सुनाजं तोचि॥
  चाप त्रुवा ग्रर खाक्रति जानू। कोप मोर खितवोर क्यामू॥
  समिध मेन चतुरक्त में चार्र। मचामचीप भये प्रमु खाई॥
  नै पचि परम् काठि वक्ति दोन्दा। समरयञ्ज जम कोटिन कीम्दा॥
- 2. स्पेन रानि निकड दुव केंगे। चरै बरितहण बलिएमु जैमे। छनत बात खदु चनकडोरो। देति मनज मधु माजर वारो। कर्षे चेरा सुधि चर्च कि नाचा। सामिनि कर्षेत्र कथा माहि पांची।

What is the purport of the first two lines? What is meant by जनकडोती? What part of speech is सुधि here? What is the original word transformed into चेते?

3. मर्मावचन सोता जब बोली। चरिप्रेरित स्रच्यक्रमित डोली।। चअं दिग्नि रेख खचार चडीसा। बार बार मार पद सीसा॥ बनदिग्निदेव मैं।पि सब काल्ल। चले जडां रावक्रमिराल्लः।

Who is चहारा here? Why is he called so? Explain the phrase रावणम्बाराह

- 4. इस दोख वन्धु प्रथम तर्षाई। मगन गयेखं रिविनकट उड़ाई। तंज न सिंह एक में। फिर खावा। में खिभमानि रिविष्टि निखरावा। What kind of verb is this निखरावा here? In what case is तैंबणाई? Point out the participles contained in these two couplets.
- 5 सुनु गठ मेर रायण वस्त्रीसा सरगिर जान जास मुजलीसा जान जमापित जास सराई पूजे जेसि गिरसमन चढ़ाई।। गिरमराज निजकरन्द जनारी। पूजे समित बार निपरारी।। Narrate in Hindi prose the legends referred to in the foregoing extract.
- 6. Out of the Hindi Ramayan, select any six words or phrases of the Persian origin, quoting, if possible, the passages where they occur.
  - 7. What samasa is it in the following words:—
    कपिकुञ्चर, दशकश्रर, चराचर, कनककसम, यथाविधि, विनाप।
    8. Explain the derivation of:—
- वन्दो. चामन, मनोज, तुरम, विमञ्ज, सदन, रिवास युवराज, चिभवेक, कद्यतद।

#### HINDI.

Examiner.—BABOO KRISHNA COMUL BHUTTACHARJEA, B. A.

1. Translate into English —

चपने मचल में एक रातको राजा माता था। इस में कुछ राजा-के जो में चाया। एकवारगी एठ कर कांद्रा वांध वाल तलवार से अक्टर के कूचें। में फिरने खगा। चागे जा कर देखे ती चार चेार बढ़े कर बातें कर रहें हैं कि किधर का चोरी करने इस चलें। उन में से एक कड़ने लगा चच्ची साचत में चला ता कुर माल डात लगे चीर बरी साच्त् चलने ये दुःख पाकर खाली दाथ फिर चानेंगे। इस तरच में सब बातें जनकी राजाने सुनीं चीर जन्हों ने राजा को देखा। जनमें से एक दोलां कि तू कीन है। राजाने कहा कि तम जो दो मो में जं। यह सुन कर जन्दों ने राजा को भी अपने साथ से सिया चीर चारी का चले। चागे जा एक जगद पडंच कर एक में एक पूक्षने स्त्रगा कि च्यपनाच्यपनागुण कचे। तब जम्डों में से एक बोस्ता में ऐसा महरत देखने जानता उरं कि जिस में यावा करने से कभी चान्नी फिर न चावे। दूसरा वाला कि मैं जिप संदिर में जार्ज ता मुक्ते कोई न देखें चार में खपना काम कर शार्क। तोसरा बास्ता में जानवरीं की भाषा जान्ता कं। चीवा बोसा मेरे पास एक ऐसी चीज है कि कोई बड़मेरा मुक्ते मारे मे से न सर्व।

2. Turn the following passage into sentences containing none but words of Sanscrit origin.

राजा निज्ञम वड़ा खक्तमंद या रूप नात पर कार्रम रहा ऐस सब्त सब्द नातें सूतवरन से सुन कर कुछ दिस्त में न साया। देश कर कान दे कर सब सुनी। फिर सूतवरन ने कहा जो तुम्ने ररादा है तो दमारे दो साथ चस्त चीर पंडितों से खच्ची साख्त दिसा कर चस्तने की तैयारी कर। दूख दीन सुबद के बक्त राजा सूत दरन मंत्रीके साथ दो कर बाडवस्त के अदर में जा पड़ंचा। तब सस दिसान ने कहा यहां तुम बैठो चीर में खपने राजा की तुमः दारे खानेको खबर दूं। 3. Explain the expressions.

इनाले कर दिया, सुवाल करना, देसनिकाल देना, पछ मानते वहां पडंचाया, एक दोपका राजा किस निनती में है, तमाम सभ में रील मचा, चाभन मार गदो पर जा बैठूं, मन के लाडु खाने क हामील नहीं है, चासका बुकानेवाला, निर्दे ची पेश में सब बैठ गये, काम तुमारा मेरे हाथ निकलता नीं, सब रिकाब में, हाजोर चे

4. अथ पराजा भे जिएसा पुरवारच कर सके तो इस निंदासम परवैठ महीं तो इस खियाल से इरगुज़र।

What is the meaning of पुरुषारच here? How is it spelt in its original form.? What is the samasa in that form and what the sense? Why is a स्डिंग्सन so called? What do you mean by खियास से दर्श आर्ता?

- 5. Sketch in Hindi the character of King Vicrama as exhibited in your text-book.
- 6. What is the general rule in Hindi for converting a simple Hindi verb into its causal form? Give examples.
  - 7. Translate the following passage into Hindi:-

The aged matron answered: My son! How can I consent to sacrifice your life to save my child? You are no less dear to me than he. While they were engaged in this conversation, the serpent whose turn it was to be offered as victim came to the spot, and when he was informed of the generous intention of the stranger, addressed him thus: My Lord! It beseems thee not that you should cast away your life, pious and magnanimous as you are, for such a worthless purpose.

#### URDU.

## Examiner.—MR. H. BLOCHMANN, M. A.

1. Translate into English-

مجنون کو اس دشت مین جنون هوا لیلی کا کیا بگرا پرونزکا اس کوچی مین خون هوا شیرین نے کیاکیا افسوس تو یه هی که انا بهی کوئی نه مجها \* جامی •

عم چیرے رگ جان را خراشد که گاهے باشد و گاهے نباشد دات اس کام میں عزت هی دردکا نام یہان راحت هی دل اس سمکش میں توق جاتا هی رستم کا اس معرے میں جی چهوگ داتا هی اسفادیار سا واین تی هو تو موم کی طوح پگهل کر ده جاوے حسرت هی حسوت را جائے لوگون نے هزارون رنج صدمے اس کام میں انائے جب بعد خرابی بسیار یہی باتجریه کار کہالائے لیکن والا بہی انائے جب بعد خرابی بسیار یہی باتجریه کار کہالائے لیکن والا بہی الحال میں هی که اس میں مشاق اور مبددی کی راے ابائ سی هی اسکا آعار هی نه انجام هی

مرض عشق میں کوئي دوست گرفتار نہو دوست تو دوست هي دشمن کو يهي آزار نہو

## ۽ مسدس ۽

کیا میں اس کافر بدکیشکا احوال کہوں یہ خواصوار بیا کرتا ھی عاشق کا خوص زار کر دیتا ھی انسان کو یہ اور زبون رفتہ رفتہ یہ بہلچاتا ھی بویت مجدوں یہ خوبریز خواجوا ہ ھی السالوں کا دیں کھوتا ھی عدلمانوں کا

- 2. Paraphrase the last two lines in Hindustani.
- شاهزادهٔ حاتم شعار سامري اسفندار پروائز -3. Explain شاهزادهٔ حاتم شعار سامري اسمز رالا کوچهٔ بار دين و دنيا فراموش اعجائب in عجائب
- 4. Put the vowel-points and meanings to رببه دهان المنطق على المنطق  ال
- 5. Answer either of the following questions—(a) Do you know any Arabic or Persian words that have chang-

ed their meanings in Hindustani?—(b) Do you know any Arabic or Persian words that have changed their pronunciations or spellings in Hindustani?

- 6. What is the construction of ماننه when preceded or followed by a noun? Give examples of الباع in Urdu. Explain the form هزارين سال criticise; هزارين سال معزار سال معزار سال هزار سالين , هزار سال
- 7. Give some particulars regarding the author of the Fisanah i Ajaib and the book itself. Compare the style with that of any other Hindustani book you have read.
- 8. Translate into pure Hindustani, excluding Arabic and Persian words,—
- "It happened that Sirajuddaulah had inflicted some time ago a punishment upon this very faqeer and had besides disgraced him by having given the order to shave off his beard and mustachios. The derwish hated him still, and having recognized the Nawab by his manners, feigned compassion and tried to soothe him. After making preparations to cook some khichari for him, the derwish ran to the governor of Rajmahal and gave information."

Translate the same passage into Urdu using as many Persian and Arabic words as possible. Express yourself . in an عبارت رئين style.

- مغتفی تاکلور واماله و تجنیس و سجع و آبدانه و آبدنیس و سجع و آبدنیا و استثنا و درف محید و حرف استثنا
- 10. Write down some general rules regarding the gender of nouns in Urdu.
  - 11. Translate into English—

بھرفرمایا مجھھ سے تونے ایا۔ی صورت کبھی دیکھی تھی ججھ اجل رسیدہ کے عمہہ سے نکلا خدا نکرے اس جرم قبیعے پر شہزا۔ی نزدیک کشتنی سوختنی و گردنزدنی هون بقول میر تقی ، شعر ، بجرم ته تیغ هی رکها تها گلے کو كچهه بات ىرى منهه سے نەنكلى تھى بېلے كو ? ميرتقى Who is

## URDU.

Examiner.-MR. H. BLOCHMANN, M. A.

1. Translate into English—

صدرے بازار میں هي اك دبنگ عار الحبا و طبابت كا ننگ شكل هي شيطان كي اور عوث نام جگ مين هلاكو كا هي قائم مفام هي متوطن ويد لعين روم كا بستي بين ركهتا هي الربوم كا جد سط دبت مدن دهسا ولا ألاغ روم سے نا شام هوا ب جراغ مملکت هدد عدن آب گهر به گهر 🗀 هی ماک الموت سے مشہور تر اسكے ولم كا مدن كرون كيا بيان تيع اجل جسكے هي رطب اللسان خامه دمین خنجر بران هی ولا قاتل هندو و مسلمان هی ولا نسخه به لکهنا کدیو وه به سرشت بهرتے به انسان سے دوزخ بهشت إ منك الموت and the هلاكو Who is

2. Paraphrase the following Mukhammas-لبون ے گرد جو اس نوجوان نے خط کو رکھا چمن چمن مین پرًا شور هر طرف عوعا هراک مرغ نے ناع باغ دي په دعا

شکر فروش که عمرش درار باد چرا نفقدے بکند طوطئ شکرخارا

3. Translate into English-

شیشهٔ دل کو صرے ساگ ستم سے توزا دليے ميرے بهي مدهة اب تيري طرف سے موزا جوكچية هم ساتهه كيا تمني نهين ولا تهورا بس کرو بس کرو ریاده نکرو نکتورا خوبروبون کا جهان بیب نهین توزا شعروحشي كا دل الني په يه تمين لكهه چهوزا

میدهم جاے دگر دل بدل آراے دگر چشم خود فرش کنم زیر کف پاے دگر

Why have such poems been called واسرخت؟ What is their metre?

- 4. What is your estimate of Saudá as a poet?
- 5. Campare the Muhammadan element in Urdu with the Norman element in English. Take as examples of comparison law terms, words expressing family relationship, the names of fruits and eatables, agricultural terms?
- 6. Define قطعة مثنوي ,غزل ,قصيدة and mention their peculiarities regarding metre, rhyme, length of poem, and subject matter.
- 7. Give fully the rule of the particle 2. State the exceptions.
- 8. Shew that there are four ways of forming the plurals of Hindustani nouns, according to the gender and the termination of the nouns. Form also the vocatives (10) ) singular and plural of the four classes of nouns.
- 9. Give the meanings and etymologies of کشمکش , خونخوار رسهالانا رغالم , قطعدار رهنچمیوز بدکیش ریانجرنه
  - 10. Translate into Urdu-
- "The grandfather of Núr Jahán was a native of Tcherán in Persia, and held a high civil office under the government of that country. His son, Mirza Ghias, was reduced to poverty, and determined to seek for a maintenance by emigrating, with his wife and a family consisting of two sons and a daughter, to India. He was pursued by misfortune even in this attempt."
  - 11. Write a short essay of about two pages either in

English or Urdu on the history of the Urdu language or on Urdu literature.

#### HISTORY.

#### Examiner.—MR. R. HAND.

1. Describe the battles of Thermopylæ, Salamis, and Platæa, and the consequences that severally resulted from them.

Nearly three centuries later, Thermopylæ was once again a battle-field. Narrate the events connected with this engagement.

- 2. There were two memorable sieges of Syracuse, at an interval of two centuries. Write the history of both of them.
- 3. "A naval defeat in a remote quarter had not only deprived Athens of empire, but was about to render her in turn a captive and a subject."

Give a clear account of the battle referred to, and detail its consequences.

- 4. Develop the progress of tragedy in Attica, touching briefly on the writings of her three great tragedians.
- 5. Sketch the life of Socrates, noting his singular opposition on two occasions to injustice and tyranny. In what relation did he stand to the Sophists; and what were the character and objects of his philosophy?
  - Ho! bold Epirotes, whither
     Hath the Red King ta'en flight?
     Ho! dogs of false Tarentum,
     Is not the gown washed white?

Write a very brief account of the origin, progress, and termination of the war here alluded to.

- 7. Describe the battles of Cynoscephalæ and Pydna, and their consequences to Greece.
- 8. Give a clear account of all the events connected with the siege of Carthage. What memorable siege under the emperors closely resembled it both in the fierce resolution of its defenders and in the ultimate fate of the city?
- 9. What was the state of Rome when the Licinian Rogations were enacted? Explain their nature and objects. When revived by T. Gracchus, to what extent were they modified? Sketch the career of the younger Gracchus.
  - 10. With equal rays immortal Tully shone:
    The Roman rostra decked the consul's throne.
    Behind, Rome's genius waits with civic crowns,
    And the great father of his country owns.

Write a summary of the events in Tully's career that are here alluded to.

#### HISTORY.

#### Examiner.—Rev. W. C. Fyfe.

- 1. Give a geographical outline of Palestine: Enumerate the different forms of government under which the Jews lived, from the Exodus to the Babylonish captivity.
- 2. What were the circumstances which called out the heroism of the Maccabees? Give a short account of Judas Maccabeus. What was the meaning of the name?

- 3. When does authentic Indian history begin? What objection is there to tracing the manners, customs, and character of a people from such a code as that of Menu? Sketch briefly the argument for determining the age of the Vedas and of Menu's code.
- 4. Give the titles of the six systems of Hindu philosophy, and the names of their founders. Describe in general terms the tenets of the Nyaya; and show what system it resembled in Europe. Mention the causes which tended to obstruct the progress of Physical science amongst the ancient Hindus.
- 5. Give a geographical and historical account of Baber's conquests; describe his character, and compare it with that of Tamerlane.
- 6. Enumerate the Mahomedan dynasties in India, mentioning the first and last monarchs of each house, and the time during which it reigned. Name the greatest of the Mahomedan princes, and mention for what he was distinguished.
- 7. Name, in chronological order, the principal acquisitions of the British in India down to the year 1805. Contrast the rule of the British in India with that of their predecessors in the government.
- 8. Enumerate the most important transactions of Lord Wellesley's administration. "He was the Akbar of the Company's dynasty:" Explain this statement.
- 9. Describe the boundaries and extent of India; its natural divisions and natural productions. Name the chief languages now spoken in India, and define the territorial limits of each.

#### DYNAMICS AND ASTRONOMY.

# Examiner.—MR. E. WILLMOT, B. A.

- 1. What are the laws of motion? What is the evidence of their truth? A body weighing 100 lbs. is moved by a constant force, which generates in a second a velocity of 8 feet per second: find what weight the force would statically support.
- 2. If s be the space described from rest in time t by a particle under the action of a uniform accelerating force f, then  $s = \frac{1}{2} f t^x$ .

If a particle from rest under gravity describe a space P in the p<sup>th</sup> second and Q in the q<sup>th</sup>, prove that in the

$$(p+q)^{th}$$
 it will describe  $P+Q+-\frac{P-Q}{2(p-q)}$ .

3. Two particles are connected by an inextensible string which passes over a smooth fixed pulley: determine the motion of each particle and the tension of the string.

Describe Atwood's machine and explain its use.

- 4. Find a formula connecting f and  $f^{-1}$  the numerical values of any, the same acceleration referred to units of time and space  $t_1$   $s_1$  and t', s', respectively. What would be the numerical value of the accelerating force of gravity, if an inch and a week were the units of space and time.
- 5. Describe and explain the phenomena of the seasons. How would they be changed if the inclination of the equator to the ecliptic were 90.?
- 6. What are Kepler's laws? and what Newton's deductions from them? If a new Satellite were discovered

revolving about the earth in 6 weeks, what would its mean distance be?

- 7. Define the Right Ascension and Declination of a heavenly body, and describe briefly the methods of their observation. What are the several effects of refraction and of the aberration of light upon the position of a star?
- 8. Explain any method of determining the latitude of a place and the local time by means of a Sextant.

If the sidereal chronometer, which keeps Greenwich time shews 13h. 15m. when the local time is 12h. 30m. sidereal time, what is the longitude?

9. State why an eclipse does not take place at every full and every new moon; and shew that there must be two and may possibly be five solar eclipses in any given twelve months.

#### HYDROSTATICS.

Examiner.—Ma. M. H. L. BEEBEE, B. A.

- 1. Define a fluid, and apply your definition to account for the equal transmission of pressures.
- 2. Define density and specific gravity; under what considerations may we take  $W = g_P V$ ? Describe the common hydrometer, and show how the specific gravities of two liquids may be compared by means of it
- 3. Find the pressure at a given depth of a heavy homogeneous liquid.

Two liquids, whose specific gravities are as two to one. rest in a cylindrical tube of radius r, whose vertical section is three sides of two concentric squares, whose

And a + 2r respectively. One of the liquids has its surface at the top of one side of the tube, and the common surface is half way down the side a, determine the volume of the other liquid. The parallel portions of the tube are vertical.

4. Show how to determine the resultant horizontal pressure in a given direction of a liquid on any surface.

A rectangular box has its lid in the surface of a liquid; find the resultant horizontal pressures on any two adjacent sides.

- 5. Find the conditions of equilibrium of a body floating in water and partly supported by a string.
- 6. State the experiment by which Boyle and Marriotte's law is demonstrated.
- 7. Describe the construction and graduation of the mercurial barometer.

If the readings of two equal barometers are h, k, h', k', under the same circumstances at two observations, compare the quantities of air left in them.

- 8. Describe the common pump. The two cylinders are of equal radius and of the same height, namely,  $\frac{1}{2}h$ , where h is the height of the water barometer. Find the height through which the water ascends in the first stroke, the piston being supposed to ascend from the bottom of its cylinder to the top.
- 9. Given that the volume of a cone is one third of that of the cylinder on the same base and with the same altitude; find the ratio of the altitudes of two conical vessels of the same vertical angle, if, when they are just immersed in two liquids whose specific gravities are as 8 to 1, the surface of the liquid in each cone is the same

depth below the vertex. The axes of the cones are vertical, and their bases downwards.

#### MENTAL SCIENCE—PAYNE.

## Examiner.—MR. GEORGE SMITH.

- 1. What is the mind? What theories have been held regarding its constitution, locality, and relation to matter?
- 2. What method must be applied to the study of the phenomena of the mind, and why has that study produced results so very much less certain than those of physical science? Vindicate the importance and value of mental science notwithstanding this.
- 3. State analytically the doctrine of mental association or suggestion. What place has it held in philosophical systems in recent times? With which view of its importance do you agree, and why?
- 4. Is the mind always consciously active? Give reasons for, and illustrations of, your answer.
- 5. Distinguish between sensation and perception, and state the elements or classes into which each may be divided.
- 6. Through what processes does the mind pass in an act of judgment?
- 7. To what common law or principle have pleasure and pain been reduced? Define both, and illustrate the definition.
- 8. State and criticise the principal doctrines of any one of the following writers, mentioning the school to which he belongs, the names of his most distinguished

followers, and the titles of his works, and point out the influence of his opinions on the thought and literature of the present day:

Plato. Spinoza. Locke. Reid.

#### MORAL PHILOSOPHY AND LOGIC.

Examiner.-MR. A. W. CROFT, M. A.

- 1. Give different senses of the word "Law," e. g. in Physical Science and in Politics. To which head is Moral Law to be referred?
- 2. Whence do we derive our notions of the moral quality of actions? State Wayland's arguments, and compare them with the Utilitarian Theory of Morals.
- 3. Point out the twofold nature of Conscience. Criticise historically the term Moral Sense as a synonym for Conscience. Explain fully the relation of Conscience to the Immediate Desires and to Self-Love.
- 4. What is the justification of Civil Punishment? Is the object of punishment to reclaim the offender or to deter others? Point out objections to both these views: and in the case of crimes to which there is great temptation, show how the measure of punishment will differ according as one or other of these views is adopted.
- 5. Indicate the limits of the control which society may exercise over (i) the physical, (ii) the intellectual liberty of the individual.

- 6. Explain the formation of Habits; and state clearly the relation of Habits to the Will.
- 7. Give Whately's account of Property and Accident. How has his account been altered by other logicians? What are Generic and Specific Property?
- 8. What is meant by the connotation and the denotation of terms? Show what terms are connotative only, what denotative only, and what both.
- 9. Show that a particular premiss requires a particular conclusion. What are mood and figure? Show that IAI is wrong in the 1st figure, OAO in the 2nd, AEE in the 3rd, and IEO in all.
- 10. How many kinds of Conversion are there? Convert—
  - " All is not gold that glitters."
  - " Crooked are the ways of sinners."
  - " None but the good are happy."
- 11. What is Induction? What methods will help you to distinguish a True Induction from a False?
- 12. Explain and illustrate the Fallacies of Petitio Principii, Composition, Irrelevant Conclusion. Solve the Fallacy of "Achilles and the Tortoise," and examine the following:—
  - (i) "The laws of nature imply a Divine Lawgiver."
- (ii) "This man will probably (i. e. more likely than not) be drawn as a conscript: a conscript will probably be killed in battle: therefore, he will probably be killed in battle."

#### CONIC SECTIONS.

# Examiner.—Mr. E. WILLMOT, B. A.

- 1. What is a locus? Define the conic sections (i) as loci (2) as sections of a cone "a straight line, a circle, a point, two parallel straight lines and two intersecting straight lines are also conic sections." Show how these may be cut out of a cone.
- 2. Define a tangent to a conic section; and give a construction for drawing two tangents to a parabola from an external point.
- 3. In the parabola prove (1) MG = 2AS. (2) QV' = 4SP. PV.
- 4. Prove in the parabola that the locus of the foot of the perpendicular from the focus on a tangent is a straight line. Enunciate and prove the corresponding proposition in the ellipse.
- 5. In the ellipse prove (1)  $\Lambda M$ .  $M\Lambda^1$ :  $MP^2$ :  $\Lambda C^2$ :  $BC^2$ . (2)  $CP' + CD' = \Lambda C' + BC'$ . (3) SP. HP = CD'.
- 6. Tangents at the extremities of any chord of an ellipse intersect in the diameter which bisects the chord.
- 7. Prove that in the hyperbola CV. CT = CP', where CV is the abscissa of any point Q measured along a diameter which meets the curve in P, and the tangent at Q in T. Where is C in the parabola?
- 8. In the hyperbola (1) define an asymptote; (2) prove that the triangle whose base is any tangent and sides the asymptotes is constant in area.

#### OPTICS.

# Examiner. - MR. M. H. L. BEEBEE, B. A.

- 1. State the law of reflexion, and show that a pencil of rays parallel to the axis of a paraboloid of revolution converge to a point after reflexion at the curve.
- 2. Prove the formula  $\frac{1}{q} + \frac{1}{p} = \frac{2}{r}$ , for reflexion at a spherical surface.

The diameter of a semicircle coincides with the axis of a semi-parabola, the focus of the one being the centre of the other, and the curves lie on opposite sides of the axis. Trace the course of a small pencil of rays parallel to the axis through three reflexions, two at the parabola and one at the semicircle.

- 3. State the laws of refraction, and find the geometrical focus of a small pencil directly incident on a plane refracting medium.
- 4. From air to water the refractive index is  $\mu$ ; show that if the angle of incidence be greater than  $\sin \frac{-1}{\mu}$  a ray will be totally reflected in the water.

An eye at the surface of a pool four feet deep sees the bottom in the form of a circle. Find its radius if  $\mu = \xi$ .

5. Find equations connecting the deviation of the axis of a small pencil refracted through a prism in a principal plane, with the refracting angle of the prism and the angle of incidence.

If the deviation, the refracting angle, and the angle of incidence each equal  $\frac{\pi}{3}$  show that  $\mu = \sqrt{3}$ .

- 6. Define a lens; and find the geometrical focus of a pencil after direct refraction through a lens, the thickness of which is neglected.
- 7. Give a description of the human eye, explaining the defect of vision called short-sight.
- 8. Describe accurately the astronomical telescope in its simplest form, and trace the course of the pencil of rays by which a portion of a distant object is viewed through it.
- 9. A plane mirror passes through one of the foci of a reflecting ellipse. If a ray of light emanate from the other focus in any direction, and be reflected first at the curve, then at the plane mirror, and then again at the curve, prove that the line joining the two points of incidence at the curve passes through a fixed point on the directrix.

#### CHEMISTRY.

# Examiner.—MR. S. B. PARTRIDGE.

- 1. Enumerate and define the laws of chemical combination, illustrating your answer by examples.
- 2. What is nitrogen? how may it be obtained? what compounds does it form with oxygen, and what physical and chemical characters do these compounds severally possess?
- 3. How is pure hydrochloric acid obtained in solution? what are its ordinary impurities, and how may each of them be recognized?
- 4. Describe and explain the structure of the flame of a common candle and of the jet produced by the ordi-

nary mouth blow-pipe. Point out also the principal uses to which the blow-pipe flame is applied.

- 5. Give a brief sketch of the composition and manufacture of porcelain.
- 6. How is lead obtained? and what are its physical and chemical properties? In what respect does the action of pure water on the metal differ from that of spring or river water?

# COMPARATIVE PHYSIOLOGY.

Examiner.—Mr. S. B. Partridge.

- 1. What are the essential parts of a respiratory organ; and what are the leading varieties of respiratory apparatus met with in the animal kingdom?
- 2. What is the structure of bone? and how is its nutrition provided for?
- 3. Describe the circulating and respiratory organs of a mosquito.
- 4. Describe the structure and functions of the salivary glands.
- 5. What do you understand by a nerve of special sensation? Illustrate your answer by examples.
- 6. Describe briefly the principal modifications of the tegumentary membrane met with in the vertebrata, and point out the objects these modifications are intended to subserve.

#### PHYSICS.

# Examiner.—MR. H. F. BLANFORD.

- 1. Give a description of Boscovich's theory of the constitution of matter.
- 2. Give three or four familiar instances of capillary attraction. To what class of attractive forces is the action to be ascribed? How is it affected by heat?
- 3. Describe the mercurial and gridiron pendulums fully. What is the object of their peculiar construction, and how is that object attained in each?
- 4. Describe categorically the analogies of radiant heat and light. Also their points of difference as affecting or affected by material bodies.
- 5. Calculate the calorific value of a fuel whose composition is—

Carbon,	•••		•••					84.87
Hydroge	n,			•••		• • •		3.46
Oxygen,	•••		•••					7.19
Sulphur,	nit	roge	n, a	sh,	anc	i		•
loss,		•••		•••		•••	•••	4.48
								100,00

The calorific equivalent of hydrogen may be taken at 34,000 units and that of carbon at 24,000.

6. The specific resistance of platinum being 6.6, and that of copper 1, what length of platinum wire of the diameter 0.01 inch may be substituted in a galvanic circuit for a copper wire 100 feet long and 0.5 inch diameter, without altering the current?

- 7. Describe Cavendish's and Faraday's experiments proving that an insulated conductor charged with electricity is unaffected in the interior.
- 8. What periodic changes does the magnetism of the earth undergo?

#### ZOOLOGY.

- . Examiner.—MR. H. F. BLANFORD.
- 1. By what variations in the structure, mode of growth and permanency of the horns of *Ruminants* are the several families of the order characterized?
- 2. Define the terms race, variety, species, genus, and type; and give an outline of the views held by different naturalists on the nature of species.
- 3. Enumerate the sub-divisions of the *Carnivora*, and give the characters of each sub-division, with illustrations taken from the Indian fauna as far as possible.
- 4. Describe the structure of the heart in the several classes of the *Vertebrata* and in the *Insecta*.
- 5. To what class and order of the Articulata does each of the following common genera belong? Describe the characters and habits of each:—

Scorpio (scorpion). Gryllotalpa (mole cricket).
Galcodes. Forficula (earwig).
Iulus. Cyclops (water-flea).
Blatta (cockroach). Limulus (king crab).
Dytiscus. Mygale.
Cancer (crab). Scolopendra (centipede).
Squilla. Scarabæus.

6. Give a description of the more striking characteristics of the fauna of Africa.

# B. L. Examination, 1868.

#### JURISPRUDENCE.

#### Examiner.—Mr. C. J. WILKINSON.

- 1. What do you understand by the Science the Philosophy, and the History of Jurisprudence?
- 2. What is implied by the word "Law," and what connection has it with morality?
- 3. Explain what is meant by perfect and imperfect obligations. What is Bentham's or Austen's contention respecting this division of obligations?
- 4. How are we to ascertain, or what are the indicia of the Laws of God which are unrevealed?
- 5. What is the distinction between jus in rem and jus in personam? Give examples of each right.
- 6. What is the origin of the term Equity as meaning Law? Give some account of the rise of the Pretorian Law; and state the province of Equity in relation to Law in English Jurisprudence.
- 7. Give a short sketch of the rise and growth of the Law of Nations, and point out the difference between it and the jus gentium of the Civil Law.
- 8. Intention or Inadvertence is a necessary ingredient in injury: analyze and shew the truth of this assumption?
- 9. What did the Roman lawyers understand by culpa; and what does the term guilt as used by English lawyers denote?
  - 10. State shortly the sources of the Roman Law.

- 11. What was the difference between *Matrimonium* and *Nuptice*; and what were the different forms of marriage in the Civil Law?
- 12. What was the effect of adoption, and what were the different kinds?
  - 13. What were the consensual contracts?
- 14. What was the *Bonorum addictio*, and what did Justinian decree in respect to it?
- 15. Define Legatum, and say how many kinds there were by the Civil Law? What circumstances rendered testaments void?

#### PERSONAL RIGHTS AND STATUS.

Examiner.—Mr. C. J. WILKINSON.

- 1. Distinguish between a Civil injury and a Crime; and how does the Law deal with each respectively?
- 2. What is the difference between civil and natural death? Under what circumstances may life be lawfully taken away?
- 3. Does general security consist of any other rights except those of security to life and limb? Define general liberty.
- 4. What are the three natural relations in private life, and what fourth has the law created?
- 5. Mention some cases in which a master is and is not liable for the acts of his servant.
- 6. State some of the effects and consequences to the parties of marriage under the English and Hindoo Laws, and say to what extent the Indian Succession

Act has altered or modified the English Law of husband and wife.

- 7. What is meant by domicile? State some of the circumstances which have been relied upon as affording evidence of the intention of keeping the domicile of origin?
- 8. How does the English law differ from the Civil and Canon Laws in its doctrine as to legitimacy? What effect has divorce upon the legitimacy of children?
- 9. What rights does an adopted son acquire and lose by adoption by Hindoo Law? Mention the different kinds of adoption and the effect of each.
- 10. If by the law of the place of the domicile of the husband, a married woman has a capacity to sue or make a contract, will her acts so done be recognized in a country where she would, if her husband were domiciled there, be unable to sue or contract?
- 11. What is a corporation sole? How are corporations created? Define a Joint Stock Company, and state what are the provisions of the Joint Stock Confpanies' Act for the winding up of a Company?
- 12. What general rule may be laid down as to what words are defamatory? Give instances. And under what circumstances will an action for slander be untenable, though the words are both disparaging and attended with special damage?
- 13. What two points are requisite to constitute the injury of false imprisonment, and what remedies are there for the injury?

#### RIGHTS OF PROPERTY.

## Examiner.—Mr. C. J. WILKINSON.

- 1. Define an estate in reversion, in remainder and in joint tenancy? What common characteristic have all estates with the exception of those held in severalty?
- 2. An estate is granted to D for life, remainder to A and the eldest son of B (B having no son at the time) and their heirs. Why does not A take in joint tenancy with the after-born son of B?
- 3. What was the original meaning of a trust and of a use? What was there analogous to a use or trust in the Roman Law?
- 4. A, seised in fee, dies intestate leaving a daughter, what effect on the daughter's estate has 'the birth of a posthumous son of A?
- 5. On what principle is the law of escheats founded? Can an alien hold lands by purchase, and what effect has his denization on the descent of his after acquired property?
- 6. Define "things personal" and state the different modes of acquiring a title in them?
- 7. Under what circumstances may a married woman make a will of personalty? What alteration was made in the English law by the Wills Act as to the capacity of an infant to make a Will?
- 8. Has the Succession Act made any and what alteration in the devolution of property of an intestate? How does the law now stand under it in respect to the property of married women?
  - 9. Mention some points of similarity between the

offices of executor and administrator, and shew how, in other respects, they differ?

10. What consequences result from the Common Law maxim that everything which is affixed to the realty becomes part thereof?

As between landlord and tenant, what fixtures may the latter remove on the determination of his tenancy, and how may the tenant's rights in this respect be restrained?

- 11. Mention what species of "chattels personal," descend to the heir. What are heir-looms, and can they be sold or devised away from the heir by a tenant in fee simple?
- 12. When the owner of land recovers it by ejectment, has he to pay for improvements which have been made upon it whilst he was dispossessed? What was the rule of the Civil Law on this point, and is it recognized by our Courts?
- 13. What rights formerly, by the Hindoo Law, had a man in ancestral and self-acquired property? To what extent can be alienate the former?

#### CONTRACTS.

### Examiner. - MR. J. H. A. BRANSON.

- 1. Define a deed, say what are its essentials, and distinguish between a deed and an escrow.
- 2. State fully the points wherein a contract by deed differs from a simple contract; say how a contract by deed may be invalidated and distinguish between consider-

ations partly legal and partly illegal, and covenants partly legal and partly illegal, where the consideration is good

- 3. Give me the facts and ruling in the case of Collins v. Blantern.
- 4. In an action by a servant for wages, what must the plaintiff prove, and under what circumstances would the master be justified in refusing payment of wages? What were the facts and what was the decision in the case of *Hockster* v. De la Tour?
- 5. State either in the words of the Statute, or in your own words, the provisions of the 4th and 17th sections of the Statute of Frauds, and say what was the contention and what the ruling in the case of Wain v. Warlters. Say also under what circumstances Equity will interfere to avert the consequences of noncompliance with the Statute.
- 6. In Randall v. Everest, Abbott, C. J. observed "A great deal has been said about the different import of the words penalty and stipulated damages." But I am of opinion that whether the term penalty or liquidated damages be used in the agreement, the party shall only be allowed to recover what damages he has really sustained." Say whether this opinion was well or ill-founded. If the former, support it by authorities and show the grounds on which you think it stands. If you think it wrong, show wherein you think the error lies.

Define liquidated damages. Say what must be attended to in a contract secured by liquidated damages, and what are the rights of the injured party in the case of a breach of a covenant, the performance of which was secured by a penalty imposed in the contract itself.

- 7. Into how many classes may covenants when viewed in relation to each other be divided? Give an example of each class, and state the point decided in the case of *Pordage* v. *Cole*.
- 8. Distinguish between covenants that run with the land and covenants that run with the reversion—and say what covenants run with the land.
- 9. The Carrying Company, by a memorandum of agreement between themselves and the East India Railway Company, undertake to provide carts, bullocks and all necessaries for the cartage of merchandise between Jubbulpore and Nagpore, and to convey all such as may be presented to them for conveyance between those places at a certain specified rate. It is mutually agreed that the arrangement shall continue in force for 12 months from 1st January, 1868. In March, 1868, the Railway Company wrote to the Carrying Company terminating the agreement. Suppose the foregoing case was submitted to you on behalf of the Carrying Company for your opinion, what advice would you give a State your reasons and, if you can, authorities in support of your opinion.
- 10. The essentials of every simple contract are a request, consideration, and a promise. A asks B to pay C £10, which he, A, gives to B. B refuses to pay C the money. Can C sue B or not? Give the reasons for your answer.
- 11. What promises will a past and executed consideration support? Illustrate your answer.
- 12. Define the term Partnership as it is used and understood in English Law. Have there been any and,

if any, what modifications introduced by the Indian legislature?

- 13. What is the measure of damages in each of the following cases—
- (1) When A, having contracted with B for the delivery to himself at a certain day of certain goods at a certain price, refuses to receive them—B being ready and willing to deliver—and—
- (2) When in such a contract as the above, A is ready and willing to receive, and B refuses to deliver.

#### EVIDENCE AND PROCEDURE.

Examiner.—Mr. J. H. A. Branson.

- 1. Formerly a husband or wife could not give evidence for or against the other in any matter; this disability is now removed in a modified manner as far as civil proceedings are concerned. What is the modification?
- 2. It is the general rule that hearsay evidence is inadmissible; give the reasons on which this rule is based. Say if there are any, and if any, what exceptions to this rule, and give the principles on which these exceptions are made.
- 3. What is an estoppel? How many kinds of estoppel are there? How far is each conclusive, and under what head of the divisions of evidence would you rank estoppels?
- 4. In what cases and under what conditions is secondary evidence admissible?

- 5. How does the law stand now in India as to cross-examining a witness regarding previous statements made by him in writing or reduced into writing? Can you point out the difference between the present and the pre-existing law on this subject?
- 6. Give me the law as laid down in Act II. of 1855 regarding professional communications.
- 7. A judge, on appeal in a suit, expressed an opinion that the facts had not been sufficiently ascertained, directed a further local enquiry to be made and remanded the case to the lower Court to be again decided there after such local enquiry. Was he right or not? Give your reasons.
- 8. Ambiguities are of two kinds, patent and latent; distinguish between them and say whether parol evidence is admissible to explain either, and if either, which kind of ambiguity?
- 9. What is the law now as to the decree in a suit for money ordering interest to be paid on the principal sum adjudged.
- 10. What course must be adopted to obtain execution of a decree out of the jurisdiction of the court by which it was passed?
- 11. A obtained a decree against B on June 21st, and attached his property on July 6th; C attached the same property, prior to decree, on June 13th, but did not obtain his decree till July 9th. Whose decree must be satisfied first?

#### CRIMINAL LAW.

#### Examiner.—Mr. J. H. A. Branson.

- 1. What is the law respecting alleged crime, when at the time of the commission of it the accused knew he was acting contrary to the law, but did the act with a view, under the influence of insane delusion, of redressing some supposed grievance or injury, or of producing some supposed public benefit?
- 2. Section 89, of the Indian Penal Code, enacts that nothing which is done in good faith for the benefit of a child or person of unsound mind by, or by consent of the guardian of that person is an offence by reason of any harm it may cause or be intended to cause to that person. To this exception there are added certain provisos, state them.
- 3. Define, as they are defined in the Penal Code, the following offences, giving examples of each: Public nuisance. Theft. Assault. Wrongful restraint. Mischief
- 4. A, a witness on behalf of the Crown in a Criminal prosecution, makes a certain statement in the preliminary investigation before the committing Justice. At the trial of the prisoner before the High Court he, A alters his statement; for instance, before the Justice he says "I was concealed behind a certain door and saw B fire the pistol," and before the High Court he says, "I was not behind the door; I did not see B fire the pistol." The witness was duly sworn on each occasion. There is no evidence to prove whether either or neither of these statements is true. Has A committed any offence or offences for which he may be prosecuted? If so, what

are they, and what provisions of the Penal Code will warrant his being tried? Give the form of Indictment for the offences which you think have been committed.

- 5. In the following cases has A been guilty of any, and if any, of what offences? When there are more offences than one, specify each and the act that constitutes it:—
- (x) A, knowing that there is a crowd of people in the street near his house and wishing merely to startle them, throws, without any definite intention of injuring any one in particular, from the top of his house, so as to fall into the crowd, a stone weighing fifteen pounds which he must know will in all probability kill any one on whom it may chance to fall. He by this causes the death of B. At the trial it is proved that if B had at once been placed under skilful medical treatment, he would probably have recovered.
- (y.) A, meaning to steal B's plate, enters his house unobserved during the day by the gate which is open. He secretes himself in the house behind some curtains, and at night when the family have retired, he issues from his place of concealment, takes down from off a nail a bunch of keys, with one of them opens the plate chest and takes out all the plate and carries it with him out into the compound by picking the lock of the entrance door. He then, for the purpose of the more speedily carrying away his booty, and for no other purpose, saddles one of B's horses and rides away with the plate; as soon as he has got out of the town he dismounts, secures the horse to a tree and leaves it there with a memorandum that it belongs to B; the saddle and plate he carries off with him

- (z.) B, a blind man, asks A, his clerk, to fill up for his, B's signature, a cheque for 1,000 Rupees payable to A in discharge of a debt due to him from B. A, draws the cheque making it for Rupees 5,000. He represents to B, that it is for 1,000 Rupees only, and B, on that representation signs it, which he would not have done had he known that it was for 5,000 rupees.
  - 6. A receives with a guilty knowledge in Burdwan two bracelets from B, which the latter had stolen in a railway carriage on the line while the train was in motion between Howrah and Scrampore. A takes the property to Kishnaghur, disposes of it there and then goes into Dacca where he is arrested. In which place or places of those that I have mentioned, may A be tried for receiving the stolen bracelets? Give the reasons for your answer. (For the purposes of this question, each of the places I have mentioned, is a separate district.)
  - 7. Suppose in the course of a trial by jury and before the finding, a juror is unable to attend, what course must be adopted under the Criminal Procedure Code?
  - 8. In each of the following cases what course does the Criminal Procedure Code prescribe—

A is tried by a jury of 5 persons:

- 4 find him guilty, and one, not guilty;
- 3 find him guilty, and two, not guilty;
- 2 find him guilty, and three, not guilty;
- 1 finds him guilty, and four, not guilty.

# L. E. Examination, 1867.

#### ARITHMETIC AND ALGEBRA.

Examiner.-MR. J. SUTCLIFFE, M. A.

- 1. Find the value of  $\frac{1}{3} \frac{1}{3} \times \frac{6}{3} \frac{1}{5} + \frac{3}{11}$  of  $(2\frac{2}{5} \frac{3}{4})$
- $-\frac{14}{12}$ ; and reduce .909 × .95 of 10s. 6d, to the decimal of £1. 5s. 3d.
- 2. The population of Great Britain in 1851 was 21121967, and the increase during the previous half century had been 93.47 per cent. what was the population of 1801?
- 3. Divide 1215013.8 by 2.023 and .000072072 by .000012. Find the fraction corresponding to 1.01 and divide 27.36 by 3.109.
- 4. In paving a court-yard 1296 bricks are employed; the exposed surface of each brick measuring 9½ in. by 4½ in.; how many tiles 6 in. square would be required for paving a yard one-ninth of the size of the former?
- 5. If the simple interest on Rs. 1250 for 3 years be be Rs. 131-4 as, what will be interest on Rs. 2000 for 5 years at the same rate?
- 6. There are two fields Those lengths are 150 yds. and 244 yds. and the breadth of the second half as great again as that of the first: these are respectively dug by men and boys who each take a strip of one given breadth. If the men be paid £49. 9s. 7d. what will be due to the

boys the workmanship of each of these being 4ths as good as a man's.

- 7. Reduce to their lowest terms  $\frac{a^2 8ax + 7x^3}{a^2 3ax 28x^3}$ and  $\frac{3x^3 + x^3 - 5x + 21}{6x^3 + 29x^3 + 26x - 21}$ 
  - 8. If a: b:: c: d prove that ma + nc: pa + nc mb + nd: pb + nd, and  $a^4 b^4 : (a b)^4 :: c^4 d^4 (c d)^4$ .
    - 9. Find the sum of the series  $\frac{5}{7} + 1 + \frac{7}{7} + &c.$  to 7 terms.
      - 1-2+4 &c. to 8 terms.
      - $1 + 2x + 3x^3 + 4x^3 + &c.$  to n terms.
  - 10. The common difference of an Arith. Prog. is 2 and the number of terms is equal to the second term. Find the first term in order that the sum may be 35.
    - 11. Solve the following equations:

(1)..... 
$$10x - \frac{14x - 9}{8x - 3} = \frac{18 - 40x^2}{3 - 4x} - 9$$
  
(2)....  $\sqrt{x + \sqrt{x^2 - 4}} = \sqrt{\frac{x + 2}{2}} + \sqrt{2(x - 2)}$ 

12. If in  $(a + x)^n$  the 7th and 8th terms are in the same ratio as the 6th and 7th in  $(a + x)^{n+1}$ , find n.

Expand 
$$(1 + 5x)^5$$
 and  $(1 - x)^{-2}$ 

# TRIGONOMETRY, LOGARITHMS AND MENSURATION.

Examiner.-MR. J. SUTCLIFFE, M. A.

1. Find the values of  $\sin 60$ ,  $\sin 15^{\circ}$  and  $\cos 36^{\circ}$ . Prove that  $\cos^{\circ} 18^{\circ}$ .  $\cos 36^{\circ} - \sin 18^{\circ}$ .  $\sin^{\circ} 36^{\circ} = \frac{\pi}{8}$ 

2. Prove the formulæ—

Sin (A + B) = sin A. cos B + cos A sin B  
Cos 3 A = 4 cos A - 3 cos A.  

$$\tan 3 A = \frac{3 \tan A - \tan^3 A}{1 - 3 \tan^3 A}$$
Cot  $\left(45^\circ - \frac{A}{2}\right) - \cot\left(45^\circ + \frac{A}{2}\right) = 2 \tan A$ 

3. A, B, C being the angles of a triangle, a, b, c the sides, and s the semiperimeter: prove that

(1)..... 
$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$
  
(2).....  $\sin A = \frac{2}{bc} \sqrt{s.(s-a)(s-b)(s-c)}$ 

(3)..... Area = 
$$\sqrt{s.(s-a)(s-b)(s-c)}$$

- 4. Define a logarithm, and prove that  $\log_a \left(\frac{x}{y}\right) = \log_a x \log_a y$ . Given  $\log 1.4 = .1461280 \log 1.5 = 1.5 \log_a x + \log_a y$ .
- 1760913, find log .000315. 5. In a triangle ABC,  $\angle$  B = 45°,  $\angle$  C = 10°, and side a = 200 ft.: find side b. log 2 = .3010300, log 172.64 = 2.2371414, log 172.65 = 2.2371666 L sin 55° = 9.9133645.
- 6. In the triangle ABC, side BC = 65, side CA = 16 and  $\angle$  BCA =  $60^{\circ}$ . Find the other angles.

 $\log 3 = 477121$  L.  $\tan 46^{\circ}.22' = 10.020726$ .  $\log 7 = .845098$  L.  $\tan 46^{\circ}.23' = 10.020979$ .

- 7. A square iron rod, an inch thick and a yard long, weighs 10½ lbs. How much would a round iron rod of the same thickness and length weigh?
- 8. A trench is dug 8 ft. deep, 14 ft. wide at the top and 10 ft. wide at the bottom; and the earth removed is

thrown up by the side of the trench, so as to form a bank sloping on each side at an angle to the horizon of which the tangent is  $\frac{3}{2}$ . What is the height of the bank?

- 9. Prove that the weight of a solid right cone 7 in. high on a circular base whose diameter is 4 in. is equal to that of a spherical shell of the same material 4 in. in diameter and 1 inch thick.
- 10. Find the number of cubic feet of air in a rectangular hut with a sloping roof; the sides of the base being 80 ft. and 25 ft., the height to the eaves 10 ft., and to the ridge of the roof 15 feet.

#### GEOMETRY AND CONIC SECTIONS.

# Examiner,-Mr. J. Sutcliffe, M. A.

- 1. If one side of a triangle be produced, the exterior angle is greater than either the interior opposite angles.
  - 2. Describe a circle about a triangle.
- . 3. On the side AB of any triangle as diameter, a circle is described; EF is a diameter parallel to BC, prove that the straight lines EB and FB bisect the interior and exterior angles at B.
- 4. The angle at the centre of a circle is double the angle at the circumference upon the same base, that is, upon the same part of the circumference.
- 5. A square being inscribed in a semicircle, determine the ratio of a side of the square to the radius of the semicircle.
- 6. Define a solid, a cone, a cube, and a parallelopiped. If two straight lines be at right angles to the same plane, they shall be parallel to one another.

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- 7. If QV be the ordinate and PV the abscissa of a point Q on the parabola measured along the diameter through any point P, then  $QV^2 = 4 SP$ . PY.
- 8. Tangents from any point on the direction of a parabola are at right angles to one another.
- 9. SY and HZ being perpendiculars from the foci of an ellipse on the tangent at any point, prove that  $SY HZ = BC^2$ .
- 10. Ordinates, drawn from the same point in the axis to the ellipse and auxiliary circle, are to one another as the semiaxis minor to the semiaxis major.
- 11. If CN be the abscissa of any point P on the hyperbola, the vertices being A and A', then

# $PN^2: AN.NA = CB^2: CA^2$

12. The parallelogram formed by drawing tangents at the extremities of a pair of conjugate diameters PP' and DD' in a hyperbola is of constant area.

# STATICS AND DYNAMICS. . .

# Examiner.—MR. J. SUTCLIFFE, M. A.

1. Define force. Explain how it is measured in Statics, and shew that a straight line may represent it completely.

What is meant by the composition and resolution of forces?

2. Assuming the parallelogram of forces, as far as the direction of the resultant is concerned, prove it for magnitude.

A force represented by 10lbs is in equilibrium at a point with two other forces, whose directions make an-

gles of 120° and 135° respectively with that of the first force; find the weights which represent these forces.

- 3. The lower end B of a rod 10ft. long is hinged to an upright post, and at its other extremity A is fastened by an inextensible string 8 feet long to a point C vertically above B, so that  $ACB = 90^{\circ}$ . If a weight of one ton be suspended from A, what will be the tension of the string.
- 4. Define the centre of gravity of a body, and the moment of a force in respect to a given point. A uniform rod 6 feet long lies on a table with one end over the edge to the extent of 2 feet; the greatest weight which can be hung from the end of the projecting portion without disturbing the equilibrium is 11b. Find the weight of the rod.
- 5. If a body be suspended from a point about which it can swing freely, it will rest with its centre of gravity in the vertical line through the point of suspension. A straight uniform wire ABC is bent at B, so that the angle ABC =  $\alpha$  and it is then suspended by a string from the point A: shew that it will rest with BC horizontal if BC =  $(AB^2 + 2AB, BC)$  cos.  $\alpha$ .
- , 6. Find the relation of P to W in the first system of pulleys, neglecting the weight of the pulleys.
- 7. At what distance from each other must the threads of a screw be cut; that a power of 28lbs, acting at the extremity of an arm 25 inches long, may press by means of the screw with a weight of 5 tons.
- 8. How are uniformly accelerating forces measured? If the space described from rest in falling for 11 seconds be 5566 feet: find the magnitude of the force.

- 9. A body projected in any direction, which is not vertical, will describe a parabola.
- 10. A shot fired with a given velocity towards a tower of given height, and whose horizontal distance from the gun is one-half of the greatest range that can be reached with the given velocity. Find between what limits the angle of projection must be, in order that the shot may hit the tower, neglecting the resistance of the air.
- 11. Find the length of a pendulum which oscillates half-seconds: the force of gravity being 32.2 feet.
- 12. Two spheres  $\Lambda$  and B, of which the mass of A is double that of B, but the velocity of B double that of A, move in opposite directions: find their velocities after impact, e being the elasticity of the spheres.

# HYDROSTATICS AND OPTICS.

Examiners.—Mr. J. Sutcliffe, M. A.

1. Explain how the transmission of fluid pressure equally in all directions is proved experimentally.

Two vertical cylinders fitted with pistons are connected at their lower ends by a tube. The area of the first piston being 12 square inches, and the pressure applied to it 120ths, what must be the area of the second piston, in order that the pressure transmitted to it may be one of 3 tons.

- 2. What is meant by pressure at a point in a fluid? In a homogeneous fluid at rest under gravity, shew that the pressure at any point varies as the depth.
  - 3. In a canal lock the water rises to the height of

15ft-against a gate 8ft. broad; find the whole pressure upon the gate, a cubic foot of water weighing 1000 ounces.

4. When a body floats in a fluid, find the conditions of equilibrium.

A cylinder of uniform density floats vertically in a fluid with two-thirds of its axis immersed. The S. G. of the fluid being .75, find that of the cylinder: also find the weight which must be placed on the cylinder in order just to submerge it.

5. Define specific gravity, and prove that if V be the volume and S the specific gravity of a body, its weight W = S V.

A coin, known to be composed of platinum and silver, is found to be exactly of the same size and weight as a sovereign: find the relative weight of the two metals in it, the specific gravities of platinum, silver, and gold being 21, 10.5, and 17.5 respectively.

- 6. Explain the action of the syphon. If the ends of a syphon were placed in two fluids of the same kind and the air were removed, describe what would take place.
- 7. Describe the construction and action of the common pump. Why is there a limit to the height to which it will raise water.
- 8. State the laws of reflexion and refraction of light. Explain the formation of an image of an object before a plane mirror.
- 9. Define the terms geometrical focus and principal focus. Find the geometrical focus of a pencil after direct reflexion at a spherical surface: and deduce the position of the principal focus of the reflector

- 10. A small direct pencil of diverging rays is incident on a double convex lens, find the focus of converging rays.
- 11. Describe the Astronomical Telescope. Trace the course of a pencil of rays from a distant object: and find the magnifying power of the Telescope.

# PRACTICE OF BUILDING, No. 1.

Examiner.—CAPTAIN PEMBERTON, R. E.

- 1. What are the principal differences in the characteristics of the stones from which are produced—(a) Pure or fat Limes—(b) Hydraulic Limes.—(c) Cements—(d) Puzzolanas?
- 2. Give a description of the various operations connected with brickmaking—(the fuel available being wood). Any one sort of kiln with which you are acquainted may be described.

What is the difference between Sand and Slop moulding?

- 3. Describe the processes by which cast iron is obtained from the ore, and enumerate some of the other substances which—(in addition to iron), are found in greater or less proportion, in cast iron.
- 4. Describe the principal physical properties of cast and wrought iron.
- 5. With what processes are you acquainted which have for their object the prevention of the decary of timber? Why is it injurious to paint unseasoned timber?

- 6. What are the predominating constituents of siliceous, argillaceous and calcareous stones? Give the names of some principal stones under each class.
- 7. What principle is adopted in the various processes for the preservation of perishable stone? Mention some of the materials which have been used for the purpose.
- 8. Describe the operation of blasting, and give a rule for determining the charge of powder to be used—What is the line of least resistance?
- 9. Give a description of the process of Lime burning in an intermittent kiln.
- 10. What are different methods adopted for slaking lime? Do Pure or Hydraulic limes slake the more quickly?

#### PRACTICE OF BUILDING, No. 2.

## Examiner.—CAPTAIN PEMBERTON, R. E.

- 1. Explain the nature of the change through which mortar, made with pure lime, passes, during the operation of setting, and state the conditions necessary to its ultimate hardness.
- 2. What is the object of wetting bricks before using them in the construction of a wall?
- 3. What is the difference between English and Flemish bond? Give plans of two successive courses of brickwork in English bond at the junction of two walls at right angles to one another, and 1½ bricks thick. The plans to extend to a length of not less than 4 bricks from the angle in each direction.

- 4. Describe a "lewis" and its use.
- 5. What are the limits of the safe load on piles driven in compressible soil—(1) when they are driven till they reach firm ground—(2) when they stand in soft ground by means of friction only?
- 6. Describe a "Monkey Engine" and "Ringing Engine" for Pile driving.
- 7. Describe the construction of a cofferdam adopted for use in water running at a speed of 3 miles an hour with a depth of 7 feet; the subsoil being a tenacious clay.
- 8. What means are employed for giving to the joints of masonry greater stability than is afforded by the adhesion of mortar, and the weight of the stones? What is the objection to the use of iron dowels?
  - 9. Describe the various operations in plastering.
- 10. What are the various kinds of masonry in ordinary use? Describe them.

## CARPENTRY AND MECHANISM.

## Examiner.—CAPTAIN PEMBERTON, R. E.

- 1. Give hand sketches illustrating different methods adopted for joining principal rafters of "Trusses" to wooden tie beams, and to ring-posts.
- 2 What is the use of a straining sill in a Queen post-truss?
- 3. What are the general principles to be borne in mind in designing joints in carpentry?
- 4. Describe, (and illustrate by a rough drawing), a fished joint and a scarped joint for a tie beam.

- 5. What is a "Shouldered Tenon," and why is this form of Tenon adopted?
- 6. With what methods are you acquainted for preserving the iron straps employed in roof framing, from rusting.
- 7. Give a sketch of a method of communicating a rotary motion to a wheel by means of a treadle.
- 8. A rope, one end of which is held in the hand, passes over a fixed pulley and under a moveable pulley to which a weight W is attached, the other end of the rope being fixed. What is the ratio of the weight to the power, when the directions of the rope on either side of the moveable pulley are parallel to each other, and the system is in equilibrium?
- 9. A toothed driving, wheel  $A_1$ , drives a follower  $a_1$ ,—which is on the same axis with a wheel  $A A_2$  drives a wheel  $a_2$  on the same axis with  $A_3$ —which in its turn drives a wheel  $a_3$ .

The number of teeth on the wheel  $A_1$ ,  $A_2$ ,  $A_3$ ,  $a_1$ ,  $a_2$ ,  $a_3$  are  $N_1$ ,  $N_2$ ,  $N_3$ ,  $n_4$ ,  $n_2$ ,  $n_3$ , what is the number of revolutions made by the wheel  $a_3$  for one revolution of  $A_1$ .

- 10. What is meant by the pitch of the teeth of toothed wheels? And what will be the diameters of the pitch circles of driving and following wheels of 8 and 50 teeth respectively, when the pitch of the teeth is 3 inches?
- 11. Describe the Governor of the Steam Engine, and its use.
- 12. Describe any two methods with which you are acquainted for converting a continuous circular motion into a reciprocating rectilinear one.

- 13. Describe the working of a common "Force Pump," illustrating the description by a rough sketch.
- 14. Explain the difference in the principles by which motion is communicated to the piston of the cylinder in Newcomen's atmospheric Engine, and in a double acting condensing Engine.
- 15. Give a section of a four-way cock and describe its operation.

# STRENGTH OF MATERIALS AND STABILITY OF STRUCTURES.

Examiner.—CAPTAIN PEMBERTON, R. E.

- 1. Name the different strains to which building materials may be exposed, giving instances of each, and describe the manner in which, in each case, destruction of the material acted on would be caused, were the force exerted to a sufficient degree.
- 2. If p be the ultimate strength, or breaking weight, of a piece of timber 1 foot long, 1 inch broad and 1 inch deep, supported at each end and loaded in the middle, to resist transverse strain, what is the strength of a beam of the same material, whose length is L feet, breadth B inches and depth D inches, (1) when the beam is fixed at one end, and the weight distributed uniformly, (2) when the bar rests on supports at each end and is loaded in the middle, (3) when it is fixed at both ends and loaded in the middle, (4) when it is similarly fixed and loaded uniformly.
  - 3. What is the ultimate strength of a solid cylindri-

cal wrought iron column 6 inches in diameter and 12 feet in height, both ends being rounded?

- 4. State approximately the resistance per square inch of cast iron and wrought iron respectively to tension and to pressure. Is a square section or a round one the strongest for the tie beam of a truss?
- 5. What is the proper ratio between the areas of the sections of the upper and lower flanges of a cast iron girder? Explain the reason for the difference between them.
- 6. Give Rankine's approximate rule for finding the horizontal thrust of an arch, not less than a quadrant.
- 7. What is the proper depth for the key stone of an arch whose radius at the crown is 30 feet (1) in the case when it stands alone, (2) when it forms one of a series of arches?
  - 8. Investigate the strains on a king-post truss.
- 9. What thickness would you give to the abutments of a brick arch in a bridge, the following particulars being known:—Span 30 feet. Height of abutments from top of foundations to spring of arch, 15 feet. Rise of arch, 6 feet. Thickness at crown, 2 feet. Height from spring of arch to top of roadway, 10 feet. The roadway to be formed by filling in of common earth.
- 10. What are the advantages of disposing a part of the masonry in a retaining wall in counterposts, and what proportion of the whole masonry may ordinarily be thus disposed in a wall of 20 to 30 feet in height?

## ROADS AND RAILWAYS.

## Examiner.—MR. H. ORMSBY, LL. B., C. E.

- 1. Calculate in cubic yards the contents of the cutting, as given in the sketch, the ratio of the slopes being 1:1. Bottom width = 30 feet.
- 2. Make a series of sketches of the ordinary forms of roads used in India. Giving longitudinal and cross sections.
  - 3. Draw up specifications for-
  - (a) A Macadamized road. (b) A Telfordized road.
- 4. Draw cross sections of the ordinary forms of P way rails and discuss the comparative merits of each.
- 5. Describe a "fish joint," and shew how allowance is made for expansion and contraction.
- 6. What are the various processes employed to prevent or arrest decay in sleepers.
- 7. Design a "running shed" capable of containing four Engines.
- 8. If a road crosses your railway on the level, discuss the problem of the comparative advantages of a "level crossing" an "over" or an "under" bridge. Mention in what circumstances each of them should be adopted.
- 9. Design a "culvert" capable of conveying a stream 2 feet wide and 7 feet deep under an embankment 20 ft. high from formation, the axis of the railway crossing the axis of the strain at an angle of 60.
- 10. Describe or define (illustrating with sketches) ballast, boxing, buffer stop, lead (in earthwork) lead (in P way), gange, points, crossing and siding.

#### HYDRAULICS.

## Examiner. - M. H. Ormsby, LL. B., C. E.

- 1. Calculate the discharge over a weir 500 feet long, the depth of water passing over being 1.75 feet from clear water surface. Given (a) no initial velocity,  $(\beta)$  an initial velocity of 120 feet per min.
- 2. What will be the diameter of a pipe which, in conjunction with another of 26 feet diameter, will discharge the same quantity of water as that delivered by a 40 feet pipe? Fall being 10 feet per mile.
  - 3. Prove that in a Trapezium of maximum discharge, area =  $p^{\bullet}$  (tan  $\frac{1}{2}\beta$  + cosec  $\beta$ ).
  - 4. Give a brief account of the various methods employed for supplying a city with water.
  - 5. The "available area" is 5.73 miles in extent. Average rain fall is 45 feet. The city contains 250,000 inhabitants. How many gallons per head per day will they receive?
  - :6. Describe the construction of an embankment dam, giving a specification. How does this differ in construction and design from an ordinary railway embankment?
  - 7. What are the different methods employed for purifying the water supply of a city? Draw sections of filter beds,
  - 8. Describe the various forms of canals in common use; upon what does the velocity of the water depend?
  - 9. Give a short account of the Ganges canal, especially describing the portion from Hurdwar to Roorkee.
    - 10. Define or describe:—

Annicut adjutage, watershed, catchment basin, available area and rainfall.

#### GEODESY.

## Examiner.—Mr. H. Ormsby, LL.B., C. E.

- 1. Give an accurate account of the measurement of the base line of a Trigonometrical Survey.
  - 2. Describe the Y level.
- 3. What is the method of detecting and correcting the "error of collimation" (a) in the Y level. ( $\beta$ ) in Gravatt's level.
- 4. Draw up an imaginary level book giving at least 12 readings. Reduce it and roughly plot your section.
- 5. Explain the manner in which contour lines are laid out on the ground. Draw a contoured sketch of a valley with a stream running through it, which has lateral streams entering it. Draw a line across this and plot the section.
- 6. How is a traverse survey with the theodolite made? Draw up an imaginary book shewing all details. Explain how your measurements and readings are checked (a) on the ground,  $(\beta)$  on paper, and shew how your survey can be plotted.
- 7. What are the different methods of laying out railway curves? and state on what occasions each should be used.
- 8. The centre lines of a railway meet at an angle of 140°, and it is intended to connect them with a curve of 2000 feet radius. Calculate tangent lengths, secant length of curve Constant angle, and offset.

- 9. The centre line of a railway is laid out over the line of an intended tunnel. How do you transfer (a) your line, and ( $\beta$ ) your levels, to the formation marked on your section?
- 10. A gallery in a mine consists of a number of drafts of different lengths horizontally inclined to one another at various angles. A shaft is already sunk at one end. It is desired to sink a shaft at the other extremity. How may the point on the surface of the ground be determined, so that the new shaft may exactly strike the end of the last draft?

#### DRAWING.

Examiner.—MR. H. ORMSBY, LL.B., C. E.

- 1. What are the three kinds of drawing, and explain why one of these is nearly useless to an Engineer.
- 2. Select any object in the room and draw it in each of these three different ways.
- · 3. •Accurately describe the theory of isometric projection, and explain how the ratio 60: 49 is obtained and how it is applied.
- 4. Construct a diagonal scale to read inches, the main scale being 1 inch to the foot.
- 5. You wish to read single minutes on a 5" theodolite. How long in inches and degrees must your vernier be? And how-many divisions to the inch can be read by it?
  - 6. Describe the principle of the vernier.
- 7. Draw a scale 4 miles to 342 inches shewing furlongs and divided diagonally into chains.

- 8. Given a French map on which the scale is a centimetre to the kilometre. What is this in inches to the mile?
- 9. Construct a scale of chains (66 feet) for a map upon which a river, known to be 100 feet wide, is represented by 275 inches.
- 10. What are the different methods of making a copy of a drawing on a reduced scale?

#### CHEMISTRY AND MINERALOGY.

Examiner.—MR. H. ORMSBY, LL. B., C. E.

- 1. How is oil of vitriol prepared, and what are the reactions which take place within the chamber?
  - 2. What is the action of nitric acid—
    (a) on Bi,  $(\beta)$  on Fe,  $(\gamma)$  on Cu?
- 3. Point out the analogies which exist between the "halogens" and briefly describe each of them.
- 4. Draw up a table of the metals, and shew in what particulars the groups differ from one another.
  - 5. What are the tests for:—

Ho So<sub>3</sub>, So<sub>2</sub>, No<sub>5</sub>, Cl, I, K, Sr, Pb, Fe, and Hg?

- 6. Describe briefly the ordinary crystalline systems.
- 7. Draw up a table of the native carbonates.
- ", ", ", ", ores of iron.
- 8. Name the specimens marked 1 to 10.
- 9. What are the formulæ for:-

Heavy spar, malachite, mispikle, orthoclase and ruby copper?

#### HEAT AND PHYSICAL GEOGRAPHY.

## Examiner.—Mr. H. Ormsby, LL.B., C. E.

1. Describe the construction of a thermometer.

 $100^{\circ}$  C does not accurately correspond with  $212^{\circ}$  F. How does this occur?

- 2. What is meant by the dew point? Describe any hygrometer.
- 3. A chamber is  $20 \times 16 \times 12$  feet. The reduced barometer stands at 30.6. Thermometer  $92^{\circ}$ . Calculate the weight of air contained in it.
  - 4. Prove that -

Relative volume of steam =  $75 \times \frac{460 + t}{p}$ 

- 5. Define Heat, Temperature, Specific heat and Latent heat.
- 6. What is the specific gravity of the earth, and how has it been determined by—
  - (a) Playfair, Hutton and Maskelyne.
  - . (B) Cavendish.
    - $(\gamma)$  Airy.
- 7. What is the shape of the earth, and how has it been determined?
  - 8. Briefly describe—
    - (a) The trade winds.
    - $(\beta)$  The gulf stream.
- 9. Draw a sketch map of India, shewing the principal mountain ranges, table lands and rivers.
  - 10. Draw sections from your map.
    - (a) From Bombay to Calcutta.
    - $(\beta)$  ,, ,, to Madras.
    - (γ) ,, Raneegunj to Darjeeling.

## Honor Examination, 1868.

#### ENGLISH.

Examiner.—Mr. C. H. TAWNEY, M. A. Poetry.

- 1. Translate into modern English prose (with brief notes).
  - (a) Ther saugh I furst the derk ymaginyng Of felony, and al the compassyng; The cruel ire, as reed as eny gleede; The pikepurs, and eek the pale drede; . The smyler with the knyf under his cloke; The schipne brennyng with the blake smoke; The tresoun of the murtheryng in the bed; The open werres, with wounds al bi-bled; Contek with bloody knyf, and scharp manace. Al ful of chirkyng was that sory place. The sleer of himself yet saugh I there, His herte-blood hath bathed al his here: The nayl y-dryve in the schode a-nyght; The colde deth, with mouth gapyng upright. Amyddes of the tempul set mischaunce, With sory comfort and evel contynaunce. I saugh woodnes laughying in his rage; Armed complaint, outhers, and fiers outrage. The caroigne in the busshe, with throte y-corve: A thousand slaine, and not of qualme y-storve;

The tiraunte, with the preye by force y-raft; The toun destroied, ther was no thynge laft.

- (b) "Palmer," him answered the Redcrosse Knight, "His be the praise, that this atchievment wrought, Who made my hand the organ of His might! More then goodwill to me attribute nought; For all I did, I did but as I ought. But you, faire Sir, whose pageant next ensewes, Well mote ye thee, as well can wish your thought, That home ye may report thrice happy newes! For well ye worthy bene for worth and gentle thewes.
- 2. From what sources did Chaucer borrow his Knight's Tale? Justify or impugn the assertion that he was the earliest *dramatic* genius of Europe.
- 3. How far is it true that Chaucer alloyed the English language by the introduction of French words and idioms?
- 4. Write a brief Philological commentary on the following passages—
  - (a) And up her eyes doth seele.
  - (b) The dead corse of an armed Knight.
  - (c) But telleth me what mestir men ye be.
  - (d) He was war of Arcite and Palamon, That foughten breeme, as it were boores tuo.
  - (e) Therefore I stynte, I nam no dyvynistre;
    - (f) The helmes there to hewen and to shrede:
    - (g) Ne how the liche-wake was y-holde
    - (h) Then forward he his purpose gan pursew.
- 5. What advantages does the English language appear to have lost by passing from a synthetic (inflected) to an analytic (uninflected) stage?

What are the practical conveniences of the analytic structure?

- 6. Explain -
- (a) Yet he the bard who first invoked thy name, Disdained in Marathon its power to feel; For not alone he nursed the poet's flame, But reached from virtue's hand the patriot steel.
- (b) Mistress! dismiss that rabble from your throne; Avaunt, is Aristarchus yet unknown? Thy mighty Scholiast, whose unwearied pains Made Horace dull, and humbled Milton's strains. Turn what they will to verse, their toil is vain, Critics like me shall make it prose again.
- (c) No officious slave
  Art thou of that false secondary power
  By which we multiply distinctions then
  Deem that our puny boundaries are things
  That we perceive, and not that we have made.
- (d) So the stately Queen abode

  For many a week, unknown among the nuns;

  Nor with them mixed, nor told her name, nor sought,

Wrapt in her grief, for housel or for shrift.

(e) Sungirt city! thou hast been Ocean's child, and then his queen; Now is come a darker day, And thou soon must be his prey, If the power that raised thee here Hallow so thy watery bier.

From what poems of what authors are the above passages taken?

7. From what ancient Philosopher did Wordsworth derive the doctrine which he has clothed in a poetical dress in his Ode on Intimations of Immortality.

Examine the argument by which its author supported it.

8. Compare the versification of Chaucer with that of Dryden. Quote any passages in the Knight's Tale where Dryden has deviated far from the original either purposely or through misconstruction.

#### ENGLISH.

## Examiner.—Mr. C. H. TAWNEY, M. A.

#### The Drama.

- 1. Explain—
- (a) If you do meet Horatio and Marcellus, The rivals of my watch, bid them make haste.
- (b) Would I had met my dearest foe in Heaven Or ever I had seen that day, Horatio.
- (c) It is a nipping and an eager air.
- (d) Is this a prologue or the posy of a ring?
- (e) Sir, in my heart there was a kind of fighting, That would not let me sleep: methought I lay Worse than the mutines in the bilboes.
- (f) A sentence is but a cheveril glove to a good wit, how quickly the wrong side may be turned outward.
- (g) Dismount thy tuck, be yare in thy preparation; for thy assailant is quick, skilful and deadly.
- 2. Polonius says that he "did enact Julius Cæsar," and was "killed in the Capitol by Brutus." What was the play that Shakspeare had in his mind?

Analyze the character of Polonius and compare it with any other fictitious character known to you.

- 3. What was the position of the Fool in a mediæval household? How is his place supplied in modern English society?
- 4. "To give these mourning duties to your father." What part of speech is mourning?
- 5. What was probably the extent of Shakspeare's classical knowledge? Contrast his use of classical literature with Ben Johnson's?
- 6. Mention some of the more prominent grammatical anomalies sanctioned by Shaksperian usage.
  - 7. Explain-
- (a) If a bloody coxcomb be a hurt, you have hurt me; I think you set nothing by a bloody coxcomb. Here comes Sir Toby, halting; you shall hear more: but if he had not been in drink, he would have tickled you othergates than he did.
  - (b) Tis true, that, swayed by strong necessity, I am enforced to eat my careful bread With too much obsequy; 'tis true, beside, That I am fain to spin my own poor raiment Out of my mere observance, being not born To a free fortune.
  - Ye avalanches, whom a breath draws down
    In mountainous o'erwhelming, come and crush me!
    I hear ye momently above, beneath,
    Crash with a frequent conflict; but ye pass,
    And only fall on things that still would live,
    On the young flourishing forest, or the hut
    And hamlet of the harmless villager.

- (d) I must do that in the evening papers, or reserve it for the Morning Herald; for I know that I have undertaken to-morrow, besides, to establish the unanimity of the fleet in the Public Advertiser, and to shoot Charles Fox in the Morning Post.
- (e) Hang it, I think it is a pity to keep her in the green room all the night.
  - Your vessel, Van den Bosch, hath felt the storm:
    She rolls dismasted in an ugly swell.
    And you would make a jury-mast of me
    Whereon to spread the tatters of your canvass.
  - (g) Bethink ye, Sirs,
    What were the fowage and the subsidies
    When bread was but four mites that's now a great.
    - 8. Write a short biographical notice of Sheridan.
- 9. How does Shakspeare's use of the following words differ from the modern use?

(a) ecstasy.

(d) entertainment.

(b) mere and merely.

(e) encounter.

(c) envy and envious.

(f) fancy.

#### ENGLISH.

Examiner.—REV. F. R. VALLINGS, B. A.

Milton. Swift. Campbell. Scott, Carlyle.

Transform the following passage into a modern style suitable for vivâ voce delivery.

"But if from the industry of a life wholly dedicated"

to studious labours, and those natural endowments haply not the worst for two and fifty degrees of northern latitude, so much must be derogated, as to count me not equal to any of those who had this privilege, I would obtain to be thought not so inferior, as yourselves are superior to the most of them who received their counsel, and how far you excel them, be assured, lords and commons, there can no greater testimony appear, than when your prudent spirit acknowledges and obeys the voice of reason from what quarter soever it be heard speaking; and renders ye as willing to repeal any act of your own setting forth, as any set forth by your predecessors.

- 2. Explain fully the following passage—
- "I remember your lordships at that time did me the honour to come into my shop, where I showed you a piece of black and white stuff first sent from the dyer; which you were pleased to approve of, and be my customer for.

However, I was so mortified that I resolved for the future to sit quietly in my shop, and deal in common goods, like the rest of my brethren; until it happened, some months ago, considering with myself that the lower and poorer sort of people wanted a plain, strong, coarse stuff, to defend them against cold easterly winds, which then blew very fierce and blasting for a long time together; I contrived one on purpose, which sold very well all over the kingdom, and preserved many thousands from agues, I then made a second and third kind of stuffs for the gentry, with the same success; insomuch that an ague has hardly been heard of for some time.

This incited me so far, that I ventured upon a fourth piece, made of the best Irish wool I could get; and I thought it grave and rich enough to be worn by the best lord or judge in the land. But of late some great folks complain, as I hear, that when they had it on, they felt a shuddering in their limbs; and have thrown it off in a rage: cursing to hell the poor Draper who invented it: so that I am determined never to work for persons of quality again."

3. Write explanations, notes to the italicised words, in the following passages:—

The question turned upon the want of half-pence in Ireland, witnesses are called on the behalf of Wood: upon the issue the patent is found good and legal; all his majesty's offices here commanded to be aiding and assisting to make it effectual; the addresses of both Houses of Parliament, of the Privy Council, and at the city Dublin, the declarations of most counties and corporations through the kingdom, are altogether laid astde, as of no weight, and the whole kingdom of Ireland nonsuited in default of appearance; as if it were a private cause between John Doe, plaintiff, and William Roe, defendant.

There is no doubt but we do want both half pence, gold and silver, and we have numberless other wants and some that we are not so much as allowed to name, although they are peculiar to this nation.

- 4. What was the principal reason of Swift's opposition to Wood's half pence?
- 5. What reasons are there for believing that the limits of ancient Germany were extended too far by Gibbon?

- , 6. Name any particulars of the condition of the ancient Germans which were likely to affect their language.
- 7. What is meant by verbosity? How does it differ from pleonasm? How may periphrasis conduce to vivacity?
- 8. What do you understand by paraphrase? To what limits is its use legitimately confined?
- 9. Do you accept Campbell's rule for the use of the definite article before the antecedents of relative clauses? Give your reasons.
  - 10. Write a full critique on Kenilworth.
- 11. Write the force of the words religionist and religiosity, mention and explain two other words of similar character.
  - 12. Characterise the style of Carlyle.
- 13. Express the sense of the following passage in plainer language, and add any notes that you may judge necessary or appropriate—

Very curious how in that poor paper-age so barren, artificial, thick quilted with pedantries, hearsays, the great fact of this universe glared in forever, wonderful, indubitable, unspeakable, divine, infernal upon this man too! How he harmonised his formulas with it, how he managed at all under such circumstances: that is a thing worth seeing. A thing to be looked at with reverence, with pity, with awe; that Church of St. Clement Danes, where Johnson still worshipped in the era of Voltaire, is to me a venerable place.

14. Shew the principal points of strength and weakness in the English language as compared with others.

#### ENGLISH.

## Examiner.—Rev. F. R. Valeings, B. A.

## Chaucer, &c.

- 1. Give a short history of the French language in England, and its influence on the English language.
- 2. Chaucer has been called the "Well of English undefiled." Another judgment of note is, that he was a "great mingler of English with French." Can you reconcile these two opinions by explaining in what sense each is true? To which of the two great dialects of the French of that period is Chaucer mainly if not entirely indebted? Explain the reason of this.
- 3. What Saxon inflexions, retained by Chaucer wholly or in part, have since his time fallen into dis-
- 4. Give some account of the peculiarities of the prose order of words in Chaucer.
- 5. Explain by the history of the English language and its component elements the irregularity of its orthography in the representation of vowel sounds. What may you hence conclude generally of the origin of a word from its containing a simple vowel sound represented by the combination of two vowels? Are you able to lay down any more particular rules on this subject?
- 6. Explain fully the origin of the two sounds of gh in English, and the connexion of their diversity with the nature of the previous vowel sound. Illustrate by analogical cases.
- 7. Latham affirmed in 1841, that he had then discovered no trace of the Gipsy language in English

slang; can you give any reason for expecting the contrary of this, and can you mention any possible instances?

- 8. Translate the following passages into modern English, and annotate the words and phrases in italics.
- (a) But certes for to meeven werre, ne sodenly for to do vengeance, we moun not deme in so litil time that it were profitable.
- (b) Than dame Prudence whan she saw how that hire husband shope him for to awreke him on his foos, and to beginne werre, she in ful humble wise, whan she saw hire time, sayde him these words: "My lord" (quod she) "I you beseche as hertly as I dare and can ne haste you not to faste, and for alle guerdons as yeve me audience. For Piers Alphonse sayth; who so ondoth to the outher good or harme, haste thee not regite it, for in this wise thy frend wol abide, and enemie shal the lenger live in drede.
  - ng) Certes, wel I wote attempre weping is nothing deded, to him that sorweful is, among folk in sorwe.
- (d) For the apostle sayth, that coveitise is the rote of alle harmes, and trosteth wel, that a coveitous man ne can not deme ne thinke, but only to fulfille the ende of his coveitise.
- (e) Bewreye not your conseil to no persone, but if so be that ye wenen Sikerly, that thurgh youre bewreying youre condition shal ben to you more profitable.
  - (f) I n'ot what to don.
- (g) Than Melibee toke hem up fro the ground ful benignely and received hir obligations and hir bondes, by hir othes upon hir pleggis and borwes.

- (h) On of the gretest adversities of the world is whan a free man by kinde, or of birthe, is constrained by poverte to eten the almesse of his enemie.
- (i) Sith I have shewed you of which folk ye shullen take the conseil, and of which folk ye shullen eschue the conseil.
- (k) Ye shuln clepe to youre conseil a few of youre frendes that ben especial. For Solomon saith; "Many frendes have thou, but among a thousand, chuse thee on to be thy conseillour." For al be it so that thou first ne telle thy conseil but to a fewe, thou mayest afterward tell it to mo folk, if it be nede.
- (1) For sothly when that werre is ones begonne there is ful many a child unborne of his moder, that shal sterve yong, by cause of thilke werre, other ellilive in sorwe, and dien in wretchednesse: and therefor that any werre be begonne, men must have gonseil and gret deliberation.
- 9, Make a glossary of the following words, givi their history and etymology when you can—

Hochepot. Anientissed.

Woodnesse. Ordeal (in Chaucer ordal).

Lordinges. Wisly.

Almesse. Leasers and gleaners.

Sibbe. Mortmain.

Debonaire.

- 10. Explain fully the prefixes be, and for?
- 11. Give the etymology of early, wont, doff, chapman, linger, tamper, alligator, veranda, balcony, fee equip, palace.
  - 12. What do you know about the principal

English dialects, their origin and peculiarities? Give illustrations from writers with whose works you are acquainted.

#### ENGLISH.

# Examiner.—Rev. F. R. Vallings, B. A. Comparative Grammar.

- 1. Explain the terms "phonetic decay" "and" "dialectic regeneration."
- 2. In the investigation of the relations between languages, why is the comparision of grammatical forms of primary importance?
- 3. Describe the method by which it is shewn that Anglo Saxon is not derived from Gothic.
- 4. Wherein may an analogy be traced between the Bengali present tense and the English present tense?
- 5. Shew the etymological connexion between a class of Bengali participle, and the English passive participle.
- 6. Explain the formation of the personal termination of verbs, and give illustrations.
- 7. What is meant by the term Romance languages? Shew a parallel in India.
- 8. What is the origin of the term Aryan? What are the eastern limits of the influence of this family of languages?
- 9. What are the Dravidian languages? Why are they so called? What is their position in the history of language in India.
- 10. What do you know about any languages in India, which have not been assigned to the Aryan or to the Dravidian family?

- 11. What is the reason why ethnology and the comparison of languages cannot be looked upon as furnishing methods for the solution of the same problem?
- 12. When does the comparison of grammar fail in the investigations of linguistic relations? Illustrate this from Bengali or English.
- 13. What is the meaning of the term agglutinative as applied to a class of languages? Why is it not advisable to apply the term family to this class?
- 14. How do you account for the presence of a guttural in one of two cognate forms, when a sibilant stands in the corresponding place in the other? Give examples from the languages of England and India.
- 15. Can you give criteria for the cases in which a language is likely to supplant another on the same geographical area? Illustrate this from the histories of Europe and India.
- 16. Investigate the form of the word shalt, and the origin of its meaning.

#### ENGLISH.

Examiner.—Mr. C. H. TAWNEY, M. A. Subject for Essay.

The advantages and disadvantages of a Censorship of the Press.

#### SANSCRIT.

### KIRATARJUNIYA MRICHCHHAKATIKA AND MEGHADHUTA.

Examiner.—REV. K. M. BANERJEA.

1. Translate into English:

षक्तविमप्रेमरसाभिरामं रामापितं दृष्टिविलोभि दृष्टम्। मनःप्रसादाञ्चलिना निकामञ्जयाच पायेथिनिवेन्द्रस्तनुः॥ धेर्यावसादेन इतप्रसादा वन्यदिपेनेव निदाधिस्यः।
निरद्वाधोद्यसम्भक्षिक्षम्वाच क्रच्छादिति राजपुनी ॥
मग्नां दिषच्यानि पद्मभूते सभावनाभूतिसियोद्दरिष्णम्।
चाधिदिषासातपसाम्यसिद्देरसदिना सा भ्यमम्यानीभूः ॥
यश्रेऽधिगम् सुखिन्यस्या वा सनुष्णसृञ्जामतिवर्तिनुं वा।
निरस्यकानामभियोगभाजां समृत्युकेवाद्ममृपैति सिद्धिः ॥
सोकं विधाना विजितस्य गाप्तं चनस्य मृष्णम् वसु जैनमोजः।
तेजिस्ताया विजयेकद्देनिन्न्निन्नियम्य।णसिवाभिमानम् ॥
श्रीडानतेराप्तजनेपनीतः संग्रय्य क्रच्छेण ख्यैः प्रपन्नः।
वितामभूतं विततं प्रथियां यशः समूचित्रव दिग्विकोणम् ॥
वीर्यावदानेषु कृतावमर्षस्यम्भूतासिव सम्प्रतितिम्।
कुर्वन्त्रयामच्यमायतीनामर्कतिपामऋद्वावशेषः ॥
प्रसन्न योऽसासु परेः प्रयुक्तः सर्भुं न श्रकः किमृताधिकर्मम्।
मवीकरिष्ययुपग्राधदादः स लदिना मे इदयिवकारः ॥

- 2. Give the roots of सम स्टिप्सा मुळान् तन्त्रन् शकाः शायान् their 3rd per. sing. present and 3rd preterite or सुङ्and the निष्टा or मा of the last five.
  - 3. In what voice is स्नर्नुम् (last line but one).
  - 4. Explain in Sanscrit prose:—

    विरच्य काननविभागमनुगिरमध्यराज्ञया।

    भोमनिनद्पित्तित्रभवः परिताऽपदिश्व सगयाम्प्रतस्थिरे॥

    खभिताभिनिः स्तविभिन्नश्रकुनिस्गयूथनिस्तनेः।

    पूर्णप्रध्वनगुत्राविवरः सत्तमा भयादिव रराम भूषरः॥

    म विरोधिनी वपिनयाय पथि सगवित्रअस्तिः।

    प्रान्ति सत्तमपि भूरिभियः सममागताः मपदि वैरमापदः॥

    चमरोगणैः शिववलस्य बलवित भयेऽध्युपस्थिते।

    वश्विततिषु विषक्षप्रधुप्रियबालवालिधिभराददे धृतिः॥

    दर्मिनकाः प्रतिभयेऽपि गजमदस्ग्रास्थिकंगरिः।

    सस्यमभिद्धश्चिरं मत्त्रभा प्रतिबोधस्थितमुखैकंगाधिपैः।

    विभरास्थभूवरपष्टमजटरश्रकरीकृत्वाकुलाः।

    पञ्चविषमितत्रदाः सरितः करिवस्थन्यस्वरस्वस्थन्यस्थाः।।

- 5. In what metre is the above extract composed? To what class of metres does it belong?
- 6. Has anything been elided in the word पिस्ति? Give the rule of such elision.
- 7. With what does सम्जन् agree (in line 6) and what is the precise meaning of that word and also of समं in the same line.
- 8. What is the root of विभराम्बभूद: Give its 3rd sing. present and 3rd preterite or खुड What other verbs are like विभराम्बभूद: in 2nd preterite or खिट

चाधि । चार्यः चाददत्त निर्धये वयं प्रमाणं; ग्रेषे तुराजा; तथापि ग्रेषिमक विज्ञाण्यतां राजा पालकः।

> चयं चि पातको विशेष, न वधी मनुरत्रवीत्। राष्ट्रादस्रामु निर्धासी विभवेरचतिः सच ।

9. Explain these lines, and compare the criminal law and practice herein represented with the law and practice now in force.

दुष्टाता परगुणमत्वरो मनुष्टो रागान्थः परिमद्द चनुकामबुद्धिः। 'सिं या यददति सृषेव जातिदोषात् मद्वाद्धं भवति न तद्विचारणीयम्॥ योऽचं स्तां कुद्धमितामपि पृष्यदेतो-राक्तय नैव कुद्धमावचयं करोमि। से।ऽचं क्यं भमरपचवचे सुद्धेषे

चधकानमातिमुख्यतं सानुमाँ चित्रक्ट्र-सुक्रेन लाखसर शिरसा वस्त्रति सावमानः। चारारेक लमपि शमयेसस्य नेदावमग्रिः सक्काराकेसम्बद्धति न चिरेकोपकारी मदस्यु॥ स्थिता तसिन् वनचरवधूभृत्तकुक्के मुद्रतें तोकेतार्गद् दुततरगतिस्तरः वर्णतीर्णः। रेवान्द्रकास्पृपलविषमे विन्धापादे विशीर्णा-भित्तिक्वेदेरिव विरचिताभूतिमक्के गजस्य॥

- 10. Translate the above two extracts into elegant Bengali.
  - 11. Where is Revá?

पाण्डुक्चायापवनष्टतयः केतकैः स्विभिन्ने-मीडारभै ग्रेष्ठवलिभुजामाकुल्यामचैत्याः। लयासके फलपरिणतिक्यामजम्बूवनामाः सम्यत्यमे कतिपयदिनस्यायिषंमा दशाणाः॥

- 12. What is the meaning of गटउवस्त्रिभुजाम्।
- 13. What is the root of सम्बद्धानी Give its 3rd person singular 3rd preterite जुड and 2nd preterite ज़िट।
  - 14. Expound in the form of a short essay in Sansonic prose, or in a tew antisatup stores the manufacture following lines:

खणां लेकामरस्थानां देवप्रतिकृतिः सुतः। मिथ ये। यस्त्रय स्त्रेशं रोचमेने स युष्यताम्॥

## SANSCRIT.

## S'IS'UPALABADHA, NAISHADACHARITA AND KAVYA PRAKAS'A.

Examiner.—Pundit Mahes'a Chandra Nyayaratna.

- 1. (a) Paraphrase the following passages in Idiomatic Sanscrit.
- (b) Describe the metre of the first Sloka. Who was

परिधः कुताऽपि समुपेत्य नरपतिमणं समात्रयत्। यामिचरककनितानुमयः समुदाचचार निक स्व बिकामः।। सते चिक्रिमिरिपुणा राज्ञि दैमातुरे युधि।
चिरस्य मिनयसनी सुद्मा दमधेषजः।
चित्रिमभेधराम्बराखयैसलमधोपरिपूरिणा प्रथक्।
जगतां चलु याखिलाद्गुताजिन सारेनिजिचिक्रधारिभिः॥
ममेव पाणा-करणेऽग्रिसाचिकं प्रसङ्गसम्पादितमङ्गसङ्गतम्।
म सा सद्याधीतवतः स्पृष्ठा कथं तवार्यपुनीयमजर्यमर्जितुम्॥

2. मुद्तिसदेति दितिजनानां रिपायविनीयसम्धमिवकाश्चिभिक्तिभिः। अपसेदियद्विषदेवरोव तैर्व्यव्यते विनीतमिवनीतशासिभिः।। चर्मा वर्मा किल यस्य न भेदां यस्य वक्तमयमस्य च तो चेत्। स्थायिमाविच न कर्णद्योची तद्व धर्मामवधोरय धीर॥

Point out any mistakes in the above two Slokas. How do the old Sanscrit Pandits defend them?

3. Explain the following Slokas as fully as you can:—

स्विधि रव्यवितये जिनेन यः, स धर्माचिकामिक्किति सया

क्रमुका मत्त्रायक्कि । अद्वेश्यादेशालयः ।

प्रत्यानधीत्य यावक्तिति दुर्मेधमे। प्रयस्त्राप्ताति विदेशेष से। यावकि ।

विकास पि विकास पत्तं अस्यादाकेति परसाचिके ।।

सदिश्रस्त्रां पुत्रराच्च यस्यां तर्कः स किं तत्प स्वाचि सूकः।

च्याका प्रद्याभिचा ए ते तुर्वाणी न वेदा यदि सन्त के तु ।

4. Explain the following line, by reference to the theory alluded to, and give any exemplication of the theory from the Puranas.

## लदेकचित्राचमस्म् विमुचतो लमेव भूला त्यावकायामि तम्।

5. Give all the different senses that the authors intended to convey by the following Slokas:—

स्तमभूतिरचोनभावभानिजितानेकपुरे। पिविद्याम्। विचिनिन्दुद्से करोत्यजः परिपूर्वेन्द्रविभेचोपतिः॥ तंचुत्रता भैति विदर्भतापि प्राकायिता नासिकयास्यनत्या। व चिनसामासति तच चिनसेतमाने। यहपदेवदिन॥ 6. Quote, from any Sanscrit works with which you are acquainted, passages parallel to the following:—

सभिवीक्य मामिकतमण्डनं यतोः करवहनीविगल्दंग्रकाः क्षियः।
दिविरेऽधिभित्ति पटचप्रतिस्नैः स्मुटमहचामित्र मेष्ठिपङ्क्तयः॥
रभिने चारपद्दमकाच्यः प्रतिमूर्द् जं निचितक्षेपूरकाः।
परिवर्षितास्त्ररुगाः समापतन् बलयीकतत्रवणपूरकाक्षियः॥
यतनोद्पास्य चरणप्रसाधिकाकरपक्षवाद्वस्वभेन काच्या।
द्वतयावकैकपद्चिनितावनिम्पद्वीक्षतेव गिरिजा चराईताम्॥
ममापि माधुः प्रतिभात्ययं क्रमयकास्ति योग्धुन चि योग्धमङ्काः॥
विद्यि प्रिये कस्य क्षते विलयते विलियते चा मुखमसुविन्द्भिः।
पुरम्लयालाकि नमग्रयम्न किं तिरस्वलक्षेष्वमभीलया मलः॥
विदर्भराजप्रभवा ततः परं वपास्त्रो वक्नुमलं न सा नल्तम्।
पुरस्त्रपुष्ठिभमुखं यद्वपा ममज्ज नेनैव मच्चक्रदे क्रियः॥
यदापवर्ष्वीपि न दातुमुत्तरं भ्रम्भाक स्त्याः त्रविस्त प्रियाय सा।
विदस्त प्रस्त्रेप तमन्रवीत् तदाक्रियास्ना मीनभना तव प्रिया॥

7. With what Vedic theory has the following Sloka any connection?

त्रृत' स दृष्टः स स्रित्सु मे। साद्धातः स मीरिन्धितवृद्धिसारम्। समाद्यातन्प्राप्तिरसुव्यया वा स्रक्षे तवासे द्वयमेव ग्रेषः॥

- 8. Prove, by quotations from your text-books, that the Ancient Hindoos were not ignorant of the fact, that the tides are caused by the attraction of the moon, and that the moon is an opaque body, deriving its light from the sun.
- 9. Give the substance of the arguments (mentioned in Naishada) of Charbaka against God and the Vedas, stating, at the same time, the replies given to them by the Devas, and your own views on the subject.
- 10. What do you think to be the probable date of the earliest Rhetorical work in Sanscrit? Of Literature (साहित्य) and Rhetoric, (सम्बद्धार) which do you

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think to have preceded the other? Determine the approximate date of Kavya Prakasha. Are the two parts (कारिका and दिल), into which this book is divided, the works of the same author? Give reasons for your answer.

- 11. Point out the figures (अस्त्रार) in the Slokas, extracted in questions 1, 3 and 6.
- 12. Quote, from your text-books, examples of the following figures?  $\bullet$

निदर्भना, तहुण, शब्दास्तक्कारमंद्रष्टि, धान्तिमत्, विषम, श्राधिक and प्रत्यमीक।

13. When are rasa doshas (रमदोष) not considered as such and why?

## S'AKUNTALA', UTTARARAMACHARITA, MAHAVI'RACHARITA AND KADAMVARI'.

Examiner,-Pundit Mahes'a Chandra Nyaratna.

- . 1. What are the essentials of a perfect Drama? Taking any Dramatic-work fixed for your examination, show how far it fulfills the necessary conditions.
- 2. Are there any fixed rules for writing prose in Sanscrit? If so, mention them. If not, can you, from your acquaintance with Sánscrit Literature, form some rules? Is there any difference in the style of prose composition, between modern and ancient Sanscrit authors? If so, which style do you prefer and why?
- 3. Annotate the following passages after the manner of Mallinath, shewing the context in each.
- (१) क्रमेच च समुखागतेर इनिजर्भरजलजनितजिक्तिः वर्जरित-भुजवस्कं सः .. अस्मिकाकर्षप्रपद्मवासासम्बद्धं स्त्रितः .. नमेद-

इस्तपां ग्रांपातिभिः .. कैसासमारतैरिभनन्यमाना ग्रांसा च तं प्रदेश .... जसधरजल सुन्धितिप्रस्थम् ग्रेषचातकधानमुखरिततमा सम्बद्धः .. प्रत्यिपर्णकपाससमुद्तिचमरोक्तस्र निवेदितमूक्षः ..... इन्द्रायुधेरिक वनावस्थानिः ..... षद्रिरिव नागस्तावद्वपरिकरेः ..... कुतिभिरिव भारद्वाजद्विजोपमेदितैः ... प्रयासाभिमुखेरिव वानरकरा कुसिस्यृष्ट मुद्धेः ....पादपैः परिष्टतं .... तस्य सरसः .. तीरे.. तं प्रदेशम् खपश्चत्।

(२) षण तस्याः कुसुमायुष एव स्वेदमञ्जनयत् सम्यमास्युत्यानयमा स्वयद्शे । अवत्य एव च गति वरोध मूप्रवाह्य स्वयस्य स्व च गति वरोध मूप्रवाह्य स्वयस्य स्वयस

- (१) प्राक्रदीद्यक्षा स्थितस्य मुनयो यनेजसः कार्यस् भनारं भुवनवयस्य चुवि यदाज्ञभागेश्वरम्। यस्मिवात्मभृवः पराऽपि पुवष्यके भवायास्यदम् दृग्दं द्यमराचिसभवसिदं तत् सष्ट्रेकामरम्॥
- (४) सिद्धं द्वीतदाचि वीर्यां दिजानां वाक्रोवीर्यां यमु तत् चित्रयाचाम्। मलपाची त्राचाना जानदग्रमसिन् दाने का सुतिसस्य राज्ञः॥
  - (५) चयं वारां राग्निः किल मत्रभूयदिल्छितेः रणं विन्धो येनाङ्गविङ्गतिराभानमञ्ज्यत्। विलिल्ये यत्कुचिस्थितग्रिखिनि वातापिवपुषा स कासां वाणीनां मुनिरकलितातास् विषयः॥
- 4. Quote some passages, from your text-books, which have now passed into proverbs.
- 5. What do you conceive to be the characteristic excellencies and defects of Sakuntala? Institute a comparison between Sakuntala and Uttara Rámacharita.
- 6. Render the following expressions into idiomatic Sanscrit:—

elviii 7 Honor examination.

আব কি, যাহা হউক, সন্দেহ কি, শুনেও শুনা নয়, অনোর আবার কথা কি, যা হয় তা হউক, আছো, হাঁ, খালি, (empty) এখানে, সেখানে, ঠিক, এই বটে।

- 7. Give a brief outline of the plot of Sakuntala. From what source did Kalidása derive the story?
- 8. Write an essay in Sanscrit on the character of Ráma Chandra, drawing your illustrations from Uttara Rámacharita and Mahábiracharita.

#### SANSCRIT.

#### SIDDHANTA KAUMUDI, &c.

Examiner .- Pundit Mahesa Chandra Nyayaratna.

## "प्रातिपदिकार्थलिक्वपरिमाणवचन्द्रमाने प्रथमां'।

- 1. Why does Panini insert चिक्रपरिमाणवचनमाचे? These words are omitted in Mugdhabodha, Sankshiptasára, &c. How do these grammars supply the omission?
- 2. Point out the compound word in the above Sutra, and explain the Samasa, giving the rule thereof.
- 3. Give the etymology of प्राप्तिपदिकार्थ. What is the general meaning of the term, in what sense does Panini use it here and why?
- 4. What are the characteristics (जन्म) of a पद according to the Sanscrit Grammarians, and the Hindoo Philosophers respectively? देवदेना पानं मच्चित How many padas are there in this sentence according to their different views? देवदेना पानम् Do these form a sentence or a phrase? Do any consider this as a sentence?

- 5. How many kinds of प्रतिपदिकार्थ are there according 1stly to the Sanscrit Grammarians, 2ndly to the Hindoo Philosophers, and 3rdly to the Rhetoricians? On what grounds do they found their respective opinions?
- 6. In what sense does Panini use "चिक्रपरिमास्वयम" any why does he limit the signification by मार ?
- 7. Has प्रथमा विमित्ति any distinct meaning? Write down the different opinions held on this point.
- 8. Is प्रथमा विभिक्ति a case-ending (कारक-विभिक्ति) or not? Give reasons for your answer.
- 9. Give examples of Nominative Cases (प्रयमा) which do not agree either with any verbs, or with any other nominatives?
- 10. Form six sentences, with Nos. from 2 to 7, wherein the verb, being turned into the Active voice, requires its nominative to be in the Accusative in No. 2, Instrumental in No. 3, Dative in No. 4 and so on to the 7th.
- 11. पामा तस्यते and काश्रीतः प्रयागा बक्रयाज्ञमम् According to what Sutras is प्रथमा used in these sentences?
- 12. Why is नाचै: (an example of the above Sutra) used in the प्रथमा? If the word had not been so used, what blunders would have been committed?
- 13. Quote, from your text-books, examples of verbs or adverbs ending in the प्रयमा
- 14. प्रष्ठत्या याचने मोतिः How would this sentence stand, if the word ऋषः be inserted in it?
- 15. Explain the following sentence grammatically, giving the meanings of all the *Bibhactis* (faults) and compound words that occur in it.

चि-सम्पदि किन्धार्मिकोऽयं पृष्णाचेन पृष्णचेनकाकं दिनं गवे सन्ध-मानः याचमानस्थापि दृष्णितमा सधर्मेनोऽपि पण्डितसभस्य परि इ दीनात् चालतागतैः स्रोक्टेरसङ्ख्य समार्क्षनीस्तर्पे सुवर्णादिमा देव सचलेण अपकाराय समस्चतः।

- 16. Translate the following passages into Sanscrit:
- (a) We agree with Milton in his estimate of poetry. It seems to us the divinest of all arts; for it is the breathing or expression of that principle or sentiment, which is deepest and sublimest in human nature; we mean of that thirst or aspiration, to which no mind is wholly a stranger, for something purer and lovelier, something more powerful, lofty and thrilling than ordinary and real life affords. No doctrine is more common among Christians than that of man's immortality; but it is not so generally understood, that the germs or principles of his whole future being are now wrapped up in his soul as the rudiments of the future plant in the seed. As a necessary result of this constitution, the soul, possessed and moved by these mighty though infant energies, is perpetually stretching beyond what is present and visible, struggling against the bounds of its earthly prison-house and seeking relief and joy in imaginings of unseen and ideal beings.
  - (b) कुत्तुमाजचिष्यदूषयो मजलाद्दवळचू यथा। विविक्षियमाणमादणयो नायद दाविष्यकायो। दुलचळकाणुरायो सळ्या मदर् परवसे। यथा। पियसचि विसमं थेमं मरणं सर्वं स्पारकं।।
  - (e) ঘোড়া লৈয়া অংগ্রমান্ অঘোধ্যা প্রবেশে।
     বিবর্প কহে আসি সগরের পাশে ।
     ঘোড়া পাইলাম গিয়া কপিলের ছানে।
     গাঁর কোপানলে পুড়ে মৈল সর্বা হনে ।

শুনিয়া সগর রাজা শোকাকুল মন।
পুদ্ধ শোকে নির্বধি করেন্ ক্রন্দন ॥
ঘধন হইল জন্ম র:ছের দশায়।
তথন ছেড়েছি আমি সবার আশায়॥
ঘাটি হাজার পুদ্ধে শাপ দিলেন গোসাই।
আপেকালে ম রিল না হইল চিরাই
অশুচি হইল যজ না হইল সায়।
কিমতে পাবেন্ মুক্তি ভাবেন উপায়॥

- 17. Translate the following passages into your vernacular:—
- (१) लज्जते म गदितः प्रियम्परे वन्नुरेव भवति चपाधिका।
  बीडमेति न तव प्रिषं यदन् श्रीमताचभवतेव भूयते॥
  तोषमेति वितथेलवैः परसे च तस्य सुरुभाः प्ररोरिभिः।
  चित्र च सुतिवचे। प्रस्तं तव सी विशेष्य मच तेन तुष्य सि।
  बङ्गपि प्रियमयन्तव बुवन् म वज्जत्यस्तवादिताञ्चनः।
  सभवन्ति यददेषदूषिते सार्व्यं सर्व्यं गुषसम्बद्धत्वि॥
  सा विभूतिरमुभावसम्पदाभूयसौ तव यदायतायति।
  सतद्वं गुरुभारभारतं वर्षमद्य सम वर्षते वर्षे।।
- (१) तात चन्द्रपाड विदित्तवेदितयसाधीतसर्व्यासस्य ते नास्यमणुपदेख्यमित केवलच निमर्गत एव चभानुभयामरतालोको च्यानप्रदोपप्रभापनेयमितगदनं तभा यावनप्रभवन चपरिकामाप्रमा दावला
  सद्याप्रभापनेयमितगदनं तभा यावनप्रभवन चपरिकामाप्रमा दावला
  सद्याप्रधार्थाऽतितीवा द्पेदाचन्द्ररोया भततममूलमन्त्रगयो विवमे
  विवयविषासादमाचः नित्यमसानग्रीचवाधा वस्त्रवन् रागमलावस्त्रेयः
  चन्नमचपावमानप्रवाधा घारा च राव्यव्यस्वपातिनद्रा भवति
  रत्यता विसरेकाभिभायमे, गर्भेयरतमभिनवयावनत्रमप्रतमकपत्रममानुषम्भित्वचित मचतायं चन्त्रमध्यपरम्यरा सर्वावनयानामेत्रकमम्प्रमान
  मायतमं किमृत सम्वायः यावनायभे च प्रायः मास्रालमस्यासनन्
  संसाव कास्रुवस्याति वृद्धः चनुक्तितम्बलतापि सर्गनेव भवति
  यूनां दृद्धः चपचरति च वात्येव मास्रायं समुद्धतरकाभानिरतिदूरमात्राच्या यावनसम्ये पुवषं प्रकृतिः नाम्यति च द्योच दव
  चन्नार्भवन्तेकः पुवषमत्यासङ्गा विषयेषु।

#### SANSCRIT.

## BHASHA-PARICHCHHEDA, MUKTAVALI AND TATTWA-KAUMUDI.

Examiner.—REV. K. M. BANERJEA.

- 1. What is the meaning of wee as a guna? Whose guna is it? Ry what other term is it expressed in the Bhasha parishchheda?
- 2. What is the समयाधिकारण? How is it defined in the Bhasha-parichchheda and how in the Tattwa Kaumudi?
  - 3. How do you distinguish between दिक् and जामन?
- 4. What is the definition of चभाव and how do you arrive at such a notion?
- 5. In how many senses is the word sabda used in the Bhasha-parichchheda? What idea is conveyed by the declaration of sabda being a guna of ákása?
- . 6. Give the definitions of यायता, चाकाङ्खा, मनम् and प्रमा according to the Bhasha-parichchheda.
  - 7. Explain-
    - ू । प्रमालं म खता पाद्यं संग्रयानुपपिताः। यभिचारस्यापदे। पि सदचारपद्माया। देतुर्थाप्तिपदे तर्कः कचित् ग्रद्धानिवैक्तेकः।

giving a brief account of what the Sidhánta-muktávali says on the same lines.

8. Explain the following memorial verses, noticing the commentary of the Tattwa Kaumudi.

दृष्टवदानुत्रविकः स द्धविद्यदिचयातिसययुक्तः।

षामान्यतम् इष्टादतोन्द्रियाणां प्रतीतिरमुमामात्। तस्त्राद्धि षासिदं परोचमाप्तात्रमात् सिद्धम्।

श्वतिकूरात् सामीयादिन्द्रियविषातास्त्रोशवस्यानात्। सीस्याद्श्वयधानाद्भिभवात् समानाभिश्वारात्र॥

## मन जरामरणञ्चतं दुःसं प्राप्तीति चेतनः पुरयः। जिज्जस्याविनिष्टमेसासादुःसं सभावेन।।

## रङ्गस्य इर्णयिला निवर्गते मर्गकी यथा खत्यात्। प्रवस्य तथात्मानं प्रकाश्य विनिवर्गते प्रकृतिः ।

- 9. How does the Sankhya philosophy deduce the existence of *Purusha?* How many eternal objects does that philosophy allow?
- 10. What is अपनःकरण opposed to? How is it subdivided?
- 11. What is meant by नगानाणि? With what dogma of the Nyaya is it comparable?
- 12. How does the Sankhya philosophy argue against Purusha being the creator?
- 13. Does the system of Kapila acknowledge the existence of God? What sort of gods does it allow?
- 14. What is the opinion of the Sankhya concerning the Vedas?
- 15. How does the Sankhya philosophy argue for the multiplicity of souls against the Vedanta dogma of unity?
- 16. Are there any grammatical terminations or affixes in Sanscrit with which the terminations of the following words may be compared?

Gravamen, acumen, verity, wisest, angelic, divine.

- 17. Compare the English and Bengali Infinitive moods with the Sanscrit चत्र or तुसन.।
- 18. Is there anything in the following words which may be compared with the Sanscrit affix 78.

Broken, past, fact, relict, seen, sunk, discreet.

19. Are there in the following expression any roots

or words which may be compared with Sanscrit words or roots.

Cenotaph, nidulation, trigonometry, helioscope, prostrate, setiferous, node, unguent.

20. With what class of Sanscrit verbs may the following be compared? Show the close analogy between them.

Justify, sanctify, verify.

### SANSCRIT. ESSAY.

Examiner.—REV. K. M. BANERJEA.

Write an essay in English on the settlement of the Aryans in India—whence they came—where they first settled—how they spread their dominion—exhibiting whatever notices may be found in the sasters of their conflicts with the Aborigines—of the theological ideas and practices which they may have introduced—of any modifications which they may have accepted in their religious worship from the aboriginal Indians, and of the effects produced by their occupation of the country.

#### MENTAL SCIENCE.

Examiner.-MR. A. W. CROFT, M. A.

- 1. Compare the Introspective and the Psychological methods of the study of Mind. What arguments can be advanced in favour of the Physiological Method? Examine Mill's objections to the latter.
- 2. Explain different senses of the word "conceive." How has this distinction been applied to attack Sir W. Hamilton's "Law of the Conditioned?"

- 3. "I am the cause of my actions."
  - "Combustion is the cause of heat."

How far is the word "cause" univocal or equivocal in these propositions?

- 4. If all our experience is derived from sensations, explain the origin of the notion of an existence transcending sensation.
- 5. What fallacious modes of thought are countenanced by the following phrases
  - a. The brain secretes thought, as the liver secretes bile.
  - b. The mind is an indivisible entity.
  - c. The will determines between conflicting desires.
  - d. The heart is the seat of the affections.
- 6. Mill thinks that Sir W. Hamilton's claim to be considered a Natural Realist is inconsistent with one of his main doctrines. Discuss the value of Mill's argument.
- 7. What definitions have been given of Emotion? Criticise them. Explain why the Psychological Method is inadequate to the study of Emotion.

#### MORAL SCIENCE.

#### Examiner.-MR. A. W. CROFT, M. A.

- 1. What elements of our moral ideas are contributed by the Individual, by the Family, and by Society?
- 2. Distinguish the phrases "permanence of moral Law," "permanence of moral distinctions." Are both the implied doctrines universally received? Point out, and account for, limits to the variation of moral Law.

- 3. On what grounds can it be maintained that selfishness, or the attainment of personal felicities, is the only possible motive to action? How is benevolence accounted for on this principle?
- 4. Explain the theory of Adam Smith. Examine Cousin's statement, "Smith has taken the effect for the cause, and his whole theory is only a long fallacy."
  - 5. The influence of motives on the Will.
- 6. Explain the difference between the theories of Moral Sense advocated respectively by Hutchison, Hartley, and Hume.
- 7. Deduce the distinctive moral doctrines of the Stoics from their fundamental axiom. Clarke's principle resembles the stoical maxim in form: are they really similar?
- 8. On what theory of society can you support the maxim—"Rebellion is justified by success?"
- 9. Describe the nature of Conscience, according to Utilitarianism.

#### ·LOGIC.

Examiner.-MR. A. W. CROFT, M. A.

- 1. Define Truth: what is its ultimate test? Explain Truth by dividing it (i) into material and moral; (ii) into Mathematical, Psychological, Logical, and Physical.
- 2. What are the principal changes in Formal Logic introduced by Sir W. Hamilton? Discuss their value.
- 3. Explain the difference between Hamilton's and Mill's views of the concept. Give your reasons for preferring either.

- 4. Distinguish between Synthetic and Analytic Judgments. According to Kant, how are Synthetic Judgment à priori possible?
- 5. "The distinction characteristic of Science is its method of graduated verification: and not the use of Induction in lieu of Deduction." Justify this statement, and illustrate it by an outline of the history of Induction.
- 6. What is the place of Inseparable Accidents in Science?
- 7. Prove that from two particular propositions, nothing can be inferred. Is this always true?
  - 8. "A part of the part is a part of the whole."
    - "A mark of the mark is a mark of the thing marked."

Contrast these two principles of reasoning; and discuss Mill's strictures on the former.

9. The logical value of circumstantial evidence.

#### NATURAL THEOLOGY.

Examiner .- MR. GEORGE SMITH.

- 1. What definitions have been, or may be, given of "Religion?" What is the relation of Religion to Natural Theology and to Theology proper?
- 2. Show how "an examination of the limits of religious thought leads us ultimately to rest not on reason but on faith;" that "our intellectual trial in this life is analogous to our moral trial, that as there are real temptations to sin which nevertheless do not abrogate the duty of right conduct, so there are real temptations

to doubt, which nevertheless do not abrogate the duty of belief."

- 3. What are the criteria of Intuition as a source of knowledge? What does it tell us of the existence, nature and character of God? How far do its conditions afford an argument for the necessity, and authority, of a divine revelation?
- 4. Prove the Personality of God. Assign to the doctrine its proper place in a system of Natural Theology.
- 5. Define Law in relation to the Creator. Criticise any one of the theories of modern times which profess to account for the origin and preservation of the world. Estimate its moral tendency.
- 6. Define the terms Analogy and Probability as used by Bishop Butler. State the object and plan of his great work.
- 7. By what lines of argument does Butler prove that the Anology of Nature shows God's government to be ---

#### (a) Moral.

- (b) A System.
- 8. What light does the analogy from the constitution of the human mind, and of external nature, throw on the nature and finality of future punishment?

### HISTORY OF PHILOSOPHY.

Examiner. -- MR. GEORGE SMITH.

1. What philosophical systems has India in common with Europe, and to what great principles may all be reduced?

- 2. Trace the influence of Plato on philosophical systems and individual philosophers at all periods, and account for that influence
- 3. Sketch the life and teaching of Philo, especially in relation to Judaism and Christianity.
- 4. Describe, and account for, the influence of Aristotle on
  - (a) Mussulman Thought.
  - (b.) Scholasticism.

What writer bears to Aristotle a-relation similar to that of Philo to Plato, and what do you know of his life and greatest work?

- 5. State the tenets of the three Roman Schools of Philosophy in Cicero's time, and show why these Schools failed to aid in regenerating society.
- 6. What do you know of the history of the Doctrino of Causality?
- 7. State succinctly the merits of the controversy between J. S. Mill and the followers of Sir William Hamilton.
- 8. Sir William Hamilton in 1846 pronounced Victor Cousin "the first philosopher of France." Justify the eulogy.

## THE EVIDENCES OF CHRISTIANITY.

Examiner.—MR. GEORGE SMITH.

1. What portion of the Evidences of Christianity has been most insisted on at different periods, such as the First, Fifth, Seventeenth and middle of the Nineteenth centuries, in Europe ? What portion is best adapted to the followers of the principal false religions respectively?

- 2. Estimate the nature and value of the Evidence derived from the personal character and teaching of Christ, and contrast that character and teaching with those of the founder of any of the religions referred to in the former question.
- 3. What is the worth of the Witness to Christianity afforded by the Jews, from the beginning of their existence as a people to the present day?
- 4. From the history of the transmission and preservation of the authoritative records of Christianity, contrasted with the experience of other systems, deduce an argument for the former.
- 5. Prove, in as great detail as possible, the authenticity and genuineness of any one of the Gospels.
- 6. What witness to the truth of Christianity is borne by the tigan writers of Greece and Rome and by the Kora ?.
- 76 Paley, writing in 1794, argues for the divine origin of Christianity from the comparative want of success in propagating it, especially in India. Criticize his facts and his arguments.
- 8. What is the peculiar value of the history and doctrine of the Resurrection of Christ, as a part of the Evidences of Christianity?

#### POLITICAL ECONOMY.

#### Examiner.—REV. W. C. FYFE.

- 1. State, according to McCulloch, the distinction between Politics, Statistics and Political Economy.
- 2. Define the terms Value, Price, Demand, Supply, Wealth, Capital, Cost of production. When and how is value regulated by utility; and when and how by cost of production?
- 3. Describe the nature and origin of Rent. State the peculiar character of Ryot Rents. Has the Ryot in Bengal any permanent interest in the improvement of the land which he cultivates?
- 4. What regulates the rate of profit? Point out any analogy which exists between rent and profits, and the essential difference between these two sources of revenue.
- 5. What regulates the rate of wages? Is there any, and if so, what connexion between the rate of wages and the price of provisions, and of other necessities of life?
- 6. To what extent does credit assist production? Show that the greatest benefit which England can confer on on India is to establish credit in this country.
- 7. State with especial reference to England and India, the advantages and disadvantages of defraying extraordinary public expenses by loans.
- 8. Explain the difference between direct and indirect taxation. Show that each system has its peculiar disadvantages; and hence that equality of taxation is best secured by raising the revenue partly by direct, and partly by indirect taxes.

- 9. Answer the objection to an income tax that "in taking from the rich what they would have expended among the poor, the tax injures the poor as much as if it had been directly levied from them."
- 10. State the chief grounds and limits of the principle of Non-Interference with private enterprise.

## Examiner.—Rev. W. C. Fyfe.

May's Constitutional History of England, and Guizot's History of Civilization.

- 1. Discuss the constitutional tendency and result of the policy of George III.
- 2. Describe the condition of the Press on the accession of George III.; and trace the progress of public opinion down to the year 1792.
- · 3. Briefly sketch the progress of religious liberty, in Great Britain during the reign of George III.
- 4. Define Civilization. Describe the condition of Europe at the fall of the Roman Empire; and show what elements were introduced into modern civilization by the Roman Empire, the Church, and the Barbarians respectively.
- 5. Describe the causes of the Crusades, and their effects upon civilization.
- 6. Trace the rise of the power of towns in modern Europe, and shew with what results to civilization.
- 7. What, according to Guizot, was the dominant character of the Reformation?

- 8. Give the true character and political meaning of the English Revolution.
- 9. Contrast modern European civilization with that of the ancient Empires and Asia at the present time.

#### Examiner.—REV. W. C. FYFE

Taylor's Historical Evidence. English Literature in the reign of George III.

- 1. State the three independent lines of proof by which the antiquity and genuineness of any ancient book may be established.
- 2. How may the age of ancient manuscripts be ascertained, how far from the dates inscribed upon them, from their known history, from their materials?
- 3. Mention the most common causes of the various readings which are met with in comparing several copies of the same author.
- 4. State the several methods available for ascertaining the credibility of ancient historical works, and show how far, by such means, our confidence is shaken or confirmed in the writings of Herodotus, Thucydides Xenophon, Sallust and Tacitus.
- 5. State the general principles of Historic Evidence; and institute a comparison between the classical and the sacred writings in relation to the proof of the genuineness and authenticity of each kind.
- 6. Give a brief history of the political literature of England during the reign of George III.

- 7. Some of the distinguished writers of the reign of George III. had already risen to fame in the reign of George II., for example Hume, Smollett and Johnson. Leaving out these, give a classified list of the most distinguished authors whose works were published during the era of the early part of the reign of George III. and the names of their works.
- 8. Mention the principal historians of literature, whose works were published between 1765 and 1807, and give an account of their works.
- 9. Briefly sketch the progress of Periodical Literature, in Great Britain, during the reign of George III.
- 10. Sketch the literary characteristics of the period as a whole; and estimate the influence of Cowper on English poetry.

### Examiner.-MR. R. HAND.

- 1. Write an epitome of Pitt's administration from 1757 to 1761. And notice briefly the subsequent career of "the Great Commoner."
- 2. "The influence of the Crown has increased, is increasing, and ought to be diminished." Under what circumstances was this resolution moved? Justify it by reference to the policy and acts of George III. To what extent is it true that "the king was his own minister?"
- 3. Narrate briefly the events connected with Wilkes from 1763 to 1782: and show how they affected the rights of the subject and the privileges of Parliament.

- 4. Detail the measures connected with the Regency Bill of 1788-9: and examine the constitutional question involved therein,
- 5. Describe the war of American Independence, noting the European complications immediately arising out of it. How did the loss of these colonies affect England?
- 6. Write a succinct narrative of the administration of Warren Hastings, with reference to the principal charges of his Impeachment. And give your views of the justice of the proceedings against him.
- 7. What is the history of the Law of Libel (the Libel Act) of 1792: and what its importance in connection with the liberty of the Press?
  - 8. Sketch the public career of
    - 1. Edmund Burke.
    - 2. Sir James Mackintosh.

#### Examiner. -- MR. R. HAND. -

- 1. Describe the social and political condition of Ireland from 1782 to 1798. Explain the nature of Poyning's Act, and justify its repeal in 1782. Show how this measure rendered the legislative union of the two countries necessary. What were the terms of the union, and what its effects on both countries?
- 2. Explain clearly the cause of Pitt's resignation in 1801. Discuss the justice and expediency of repealing the Laws against Roman Catholics: and give the history of the Catholic Relief Bill of 1829.

- 3. Review the measures against the trade in slaves from the Association of 1787 to the abolition of the trade in 1807.
- 4. Describe at length the effects on England of the French Revolution. Justify Pitt's war policy, and show its ultimate advantages to England.
- 5. What was the Continental Policy of Napoleon that produced the Berlin and Milan decrees? Give their history and purport. What were their effects on English commerce?
- 6. Write a short narrative of the events of "the hundred days."
- 7. Give a clear account of "the Settlement of Europe" at the Vienna Congress (1815). Discuss its policy. How far have recent events modified this compact?
  - 8. Sketch the public career of
    - 1. Thomas Erskine.
    - 2. Henry Grattan.

Examiner. - MR. R. HAND.

#### Essay.

Were the interests of England concerned in the integrity of Poland: and are they concerned in the preservation of the Ottoman Empire?

## ALGEBRA, TRIGONOMETRY, AND THEORY OF EQUATIONS.

Examiner.—Mr. E. WILLMOT, B. A.

- 1. Find the least solutions of—
- (a)  $x^2 13y^2 + 1 = 0$ . (B)  $\tan (\pi \cot \theta) = \cot (\pi \tan \theta)$
- 2. Find the number of combinations of n letters taken all together of which p are a's, q are b's, r are c's......

There are n points in a plane, no three of which are in the same straight line, find the number of points of intersection made by indefinite straight lines joining every pair of points.

3. Discuss the convergency or divergency of the infinite series

$$\frac{1}{1^p} + \frac{1}{2^p} + \frac{1}{3^p} + \dots$$

for all positive and negative values of p.

Evaluate the infinite series (r and b r 
leq 1)

$$a + ar + (a + ab) r^2 + (a + ab + ab^2) r^3 + \dots$$

4. Prove the Exponential Theorem. Show that the Napierian logarithm of  $(1+x)^{\frac{4+x}{2}}$   $(1-x)^{\frac{1-x}{2}}$ 

$$\frac{x^4}{1.2} + \frac{x^4}{3.4} + \frac{x^6}{5.6} + \dots$$

5. Prove the law of formation of the successive convergents to a continued fraction. Find the convergents to  $\sqrt{2}$ .

If 
$$\frac{a}{a}$$
,  $\frac{\beta}{b}$ ,  $\frac{\gamma}{c}$  ... be successive convergents to  $\sqrt{x}$  shew that an equally correct series of convergents will be  $\frac{xa}{a}$ ,  $\frac{xb}{\beta}$ ,  $\frac{xc}{\gamma}$ ......

- 6. Prove that in general the change of the tangent of an angle is approximately proportional to the change of the angle: and that the change of the tabular logarithmic tangent is approximately proportional to the change of the angle.
- 7. An observer on a plane at the foot of a rock surmounted by a light house n times as high as the rock, finds that he is standing in such a position, that the light house subtends the greatest possible angle at his eye, (supposed on the horizontal plane through the foot of the rock). Find his distance from the foot of the rock in terms of its known height: and shew that a small error in the height of the rock will give n+2 times as great an error in the distance as the same small error in the height of the light house will give.

8. Find the limits 
$$(n = \inf)$$
 of  $\left(\cos \frac{a}{n}\right)^n$  and  $\left(\frac{n}{a}\sin \frac{a}{n}\right)^n$ ; and prove that  $\sin a = a - \frac{a^3}{1.2.3} + \frac{a^5}{1.2.3.4.5} - \&c.$ 

- 9. Evaluate  $\pi$  by any *two* methods of different kinds.
- 10. Find the number of positive integers which are less than a given number and prime to it.

If x be any prime number except 2, the integral part of  $(1 + \sqrt{2})^x$  is divisible by 2x.

11. Shew that a real root of the equation f'(x) = 0 lies between every adjacent two of the roots of the equation f(x) = 0.

If a, b, c be coefficients of three consecutive powers of x in f(x) and  $b_3^2 \angle ac$ ,—the roots of the equation f(x) = 0 cannot be all real.

- 12. Give Euler's solution of a biquadratic: and prove that the equation  $x^4 + 6q x^9 + 4r x + s = 0$  will have equal roots if  $(s + 3q^2)^3 = 27 (qs r^2 q^3)^2$ .
- 13. Explain Horner's method of approximation to the root of an equation with numerical coefficients, and find by that method the real roots of the equation.

$$x + 10x^2 + 8x - 120 = 0.$$

#### PLANE AND SOLID GEOMETRY.

Examiner.-Mr. M. H. L Beebee, B. A.

- 1. Shew that Ax + By + C = 0 represents a straight line. What does it become when A and B are zero? Hence interpret the equation  $aa + b\beta + c\gamma = 0$  in trilinear coordinates, where a, b, c are the sides of the triangle of reference. Find the condition that  $l_1 a + m_1 \beta + n_1 \gamma = 0$ , and  $l_2 a + m_2 \beta + n_2 \gamma = 0$  may be parallel.
- 2. Find the general equation to a circle in rectangular coordinates. Shew that the locus of a point, which moves so that its distance from a fixed point is double its distance from another fixed point is a circle.
- 3. Find the polar equation to an ellipse with the focus as pole. If P S Q be a focal chord, shew that the rectangle P S. S Q is to P Q in a constant ratio.

4. Find the condition that the general equation of the second degree may represent a parabola, an ellipse and an hyperbola respectively.

If 
$$y - \beta = m_1(x - a)$$
 be two conjugate diameters  $y - \beta = m_2(x - a)$  be two conjugate diameters of the curve  $ax^2 + 2bxy + cy^2 + 2dx + 2ey = 1$ , shew that  $m_1 m_2 c + (m_1 + m_2)b + a = 0$ .

5. Interpret (1) 
$$\frac{l}{a} + \frac{m}{B} + \frac{n}{\gamma} = 0$$

$$(2) \quad a\beta - k\gamma^2 = 0.$$

By means of (2) or otherwise, shew that if two tangents and any chord be drawn to a conic from an external point, and from one of the points of contact, lines be drawn to the points of intersection of the chord and the conic, these two lines together with the tangent at the point and the chord of contact form a harmonic pencil.

6. In Solid Geometry determine the loci of (1)

$$\frac{x-a}{l} = \frac{y-\beta}{m} = \frac{z-\gamma}{n} (2) \frac{x^2}{a^2} + \frac{y^2}{b^2} - \frac{z}{c^2} = 1.$$

- (3)  $r \sin \theta a \cos \phi = 0$ . (4)  $r a \sin \theta \cos \phi = 0$ .
- 7. Find the length of the perpendicular from the point x, y, z, on a given straight line, and shew that the shortest distance between any two straight lines is perpendicular to both.

Two straight lines not in the same plane are at right angles; shew that the locus of the middle points of a series of straight lines of constant length terminated by them is a circle.

8. Find the equation to a plane passing through a given point, and perpendicular to a given straight line.

9. Find the equation to the tangent plane to a surface; also find when there will be a tangent cone of the  $\overline{n+1}|^{th}$  order.

Obtain the equation to the tangent plane at any point of an ellipsoid, and shew that the locus of the feet of the perpendiculars upon it from the centre is the surface  $(x^2 + y^2 + z^2)^2 - (a^2 x^2 + b^2 y^2 + c^2 z^2) = 0$ .

10. Define the terms, osculating plane, binormal, and principal normal, and find the direction cosines of the latter, when the arc is the independent variable.

#### DIFFERENTIAL AND INTEGRAL CALCULUS.

Examiner.—Mr. E. WILLMOT, B. A.

- 1. Prove (1) that the differential coefficient of a constant quantity is zero; (2) that  $\frac{dy}{dx} \cdot \frac{dx}{dy} = 1$ . From the definition of a differential coefficient, find those of  $\sin^{-1} x$  and  $\frac{1+x}{1-x}$ .
- 2. Obtain Maclaurin's Theorem from Taylor's, and prove that  $(\cos x)^n = 1 \frac{nx^2}{1.2} + \frac{n(3n-2)}{1.2.3.4}x^4 \frac{n\{15(n-1)+1\}}{1.2...6}x^6 + &c.$
- 3. If  $x = r \cos \theta$ ,  $y = r \sin \theta$  obtain the second differential coefficients of y with respect to x in terms of r,  $\theta$  as variables. If  $x = e^t$ , shew that—

$$x^{n} \frac{d^{n} y}{dx^{n}} = \left(\frac{d}{dt} - (n-1)\right) \left(\frac{d}{dt} - (n-2)\right) \dots$$

$$\left(\frac{d}{dt}-1\right)\frac{dy}{dt}.$$

- 4. Two tangents are drawn to a Hyperbola; a third cuts these, so that the triangle formed by the three is the greatest possible; shew that the third side is bisected at its point of contact.
  - 5. Prove, explaining the symbols, that

$$\begin{split} \rho &= - \Big\{ \frac{1 + \left(\frac{dy}{dx}\right)^2}{\frac{d^2y}{dx^2}} \Big\}^{\frac{3}{2}} = \Big\{ \frac{r^2 + \left(\frac{dr}{d\theta}\right)^2}{\frac{d\theta}{d\theta}} \Big\}^{\frac{3}{2}} = \\ & \frac{\frac{d^2y}{dx^2}}{r^2 + 2\left(\frac{dr}{d\theta}\right)^2 - r\frac{d^2r}{d^2\theta^2}} \\ & \frac{\left\{ \frac{u^2 + \left(\frac{du}{d\theta}\right)^2}{\frac{d\theta}{d\theta}} \right\}^{\frac{3}{2}}}{u^3 \left(u + \frac{d^2u}{d\theta^2}\right)} = \frac{ds}{d\psi} = r\frac{dr}{dp}. \end{split}$$

If A be the area between a curve, its evolute, and its radius of curvature, shew that

$$\frac{\frac{dA}{dx}}{\frac{dA}{dx}} = \frac{\left\{1 + \left(\frac{dy}{dx}\right)^2\right\}^2}{2\frac{d^2y}{dx^2}}$$

- 6. What is a cusp? and a point of inflexion? Discuss the conditions for the existence of both. Examine the following curves to discover their singular points.
  - (a)  $y^3 = (x-a)^2 (x-c)$
  - ( $\beta$ )  $y = x^2 \tan x$ ( $\gamma$ )  $r^2\theta = a^2$
  - 7. Trace the curves (a)  $y = x^2 5x + 6$

(\beta) 
$$y^2 = x \frac{(x-a)}{x+c} (x-b)$$
 (\gamma)  $r = a (1 - \cos \theta)$ .

(8) 
$$s = a \tan \phi$$
 (c)  $\left(\frac{x-a}{x}\right)^2 + \left(\frac{y-b}{y}\right)^2 = 1$ 

8. Integrate the following functions  $\frac{1}{\sin m x}$ ;

$$\left(\log \frac{x}{a}\right)^{3}; \frac{1}{(x-1)^{2}(x^{2}+1)^{2}};$$
and  $\frac{1}{a+bx+cx^{2}}$  for all values of  $a$ ,  $b$ , and  $c$ .

Also  $\frac{1}{e^{x}+e^{-x}}; e^{-x}\cos^{3}x; \frac{1}{(a^{2}-x^{2})^{\frac{5}{2}}}.$ 

- 9. Find the area common to the three plane figures whose boundaries are given by y = 4 ax,  $x^2 = 4 ay$ , and  $x^2 + y^2 4 a (x + y) + 7 a^2 = 0$ .
- 10. Show that the integral  $\int x^{m-1} (a + bx^n)^{\frac{p}{q}} dx$  can be found immediately in two cases.

#### STATICS AND DYNAMICS.

#### Examiner.—Mr. M. H. L. Beebee, B. A.

- 1. Shew how to find the resultant of any number of forces in one plane, whose directions meet in a point. Two equal circles intersect in A and B; any line PQN perpendicular to AB is drawn meeting the circles in P and Q and AB in N. Prove that the resultant of four forces represented by PA, PB, QA, QB is of constant magnitude.
- 2. In any system of forces acting on a rigid body, determine the conditions of equilibrium. A uniform heavy straight rod is supported by resting on a smooth peg, while one end is attached to a string which is fastened to another peg, the line joining the pegs being horizontal, and equal in length to the string. Shew that, if  $\phi$  be the angle which the string makes with the

rod,  $a \cos \phi = l \cos 2 \phi$ , where l and 4 a are the lengths of the string and the rod respectively.

- 3. Shew how to find the centre of gravity of any surface. Find that of a hemispherical surface; also that of the arc of a circle.
- 4. Find the form of equilibrium and the tension at any point of a flexible string acted on by a given central force.

A uniform string occupies one half of a fine elliptic tube bounded by the major axis, and is attracted by two equal centres of force, one in each focus  $\left(\frac{\mu}{r^2}\right)$ ; shew

that the tension at any point P varies as  $\frac{1}{BC^2} - \frac{1}{CD}$ 

where CD is the diameter conjugate to CP, C being the centre of the ellipse.

5. Prove the principle of virtual velocities for a system of forces in equilibrium.

Apply it to shew that, if on a smooth elliptic with its plane and its major axis vertical, a ring can slide attached to two strings, each of which passes over a smooth peg at the focus, one over a peg at one focus, and the other over a peg at the other, and supports a given weight, and if there be equilibrium for any position of the ring away from the extremities of the major axis, there will be equilibrium for all positions of the ring.

6. Define acceleration and angular velocity; and obtain expressions for the accelerations of a point, relative to axes revolving in any manner in the plane of the point's motion about a fixed axis, the motion relative to

fixed axes in the same plane, and with the same origin being known.

AB, BD, CD are three rods in one plane jointed together at B and D. AB turns in the plane about A and CD in the plane about C. Shew that, if  $\omega$  be the angular velocity of AB, that of CD is  $\omega$   $\frac{AB}{CD} \frac{\sin ABD}{\sin CDB}$ .

7. State the third law of motion; and obtain the equation to a central orbit in the form  $\frac{d^2u}{dJ^2} + u = \frac{P}{h^2u^2}$ , where P is the force on a unit of mass.

A particle is describing a circle of radius a under a force  $= \mu$  (distance)  $^{-3}$  and the velocity is suddenly diminished by one half, find the orbit described: and shew that the particle will fall into the centre of torce

after a time 
$$\frac{2 a^i}{\sqrt{3 \mu}}$$
.

- 8. Find the motion of a particle descending under the influence of gravity in a medium, whose resistance varies as the square of the velocity. Describe the appearance of a small bright object falling from a great height above the earth's surface on a dark night.
- 9. Obtain equations to determine the motion of a particle constrained to move on a given plane curve. A seconds pendulum when taken to the top of a mountain x miles high, will lose about  $21.6 ext{ } x$  beats in a day.
- 10. A ball is projected upwards at an angle  $\alpha$  with the horizon, and falls on a plane whose angle of clevation is  $\beta$ ; if after two rebounds it has a horizontal direction on reaching the plane a third time, find the modulus of elasticity in terms of  $\alpha$  and  $\beta$ .

#### HYDROSTATICS AND HYDRODYNAMICS.

Examiner.—MR. E. W. WILLMOT, B. A.

- 1. Describe the mercurial barometer, and shew how it is graduated. Explain clearly to what extent a given alteration in the thermometer affects the reading of the barometer, the atmospheric pressure being supposed to remain unaltered.
- 2. Prove the formulæ  $p = g \rho z$  and  $p = \sigma z$ , explaining the meaning of the symbols. Water being the standard, find the units of time and space, that these formulæ may both give the pressure in maunds.
- 3. Shew that the differential equation which determines the pressure at any point of a fluid at rest under the action of given forces is  $\frac{1}{\rho} dp = X dx + Y dy + Z dz$ . Hence shew that the equilibrium of a heavy homogeneous fluid under such forces as occur in nature is always possible.
- 4. A mass of homogeneous liquid contained in a vessel revolves uniformly about a vertical axis; determine the surfaces of equal pressure. A fine elliptical tube half full of water revolves about a fixed vertical axis in its own plane with an angular velocity  $\omega$ ; prove that the straight line joining the free surfaces of the fluid is inclined to the horizon at an angle  $\tan^{-1}$
- $\left(\frac{p_{\omega}}{g}\right)$  where p is the distance of the axis from the centre of the ellipse.
- 5. Define the centre of pressure on a plane surface exposed to the action at a fluid at rest; and shew

how to find the resultant pressures on any surface by a fluid at rest under the action of any given forces. A conical cup of uniform thickness whose external and internal radii are R, and r, is filled with fluid of specific gravity unity and inverted on a table; shew that if no fluid escapes, the S. G. of the material of the cup

is 
$$R^3 - \frac{r^3}{r^3}$$
.

- 6. Define metacentre, and find its position in a solid of revolution. Show that the time of a small oscillation of a sphere floating in a fluid of double its specific gravity due to a small vertical displacement is  $\pi = \sqrt{\frac{2r}{3a}}$ , where r is the radius of the sphere.
- 7. Explain the formulæ  $p = k \rho (1 + \alpha t)$ , and shew that the pressures of the atmosphere at heights z,  $z^{1}$  for a mean temperature t are approximately connected by

the equation, 
$$k \log \frac{p^1}{p} = \frac{gr^2}{1+at} \frac{z-z^1}{(r+z)} \frac{z-z^1}{(r+z^1)}$$
, being the earth's radius.

Describe how this may be applied to deduce the elevation from barometer readings.

8. Obtain the formulæ for determining fluid motion,

$$\frac{1}{\rho} \frac{dp}{ds} = S - \frac{dv}{dt} - \frac{vdv}{ds}$$

$$\frac{d}{dt} \frac{(k\rho)}{t} + \frac{d}{ds} \frac{(k\rho v)}{t} = 0.$$

Explain how the hypotheses of steady motion and parallel sections affect these equations.

9. A vase in the form of a surface of revolution,

whose axis is vertical and the generating curve of which is always inclined at a small angle to the axis, contains liquid which is allowed to flow out through the vase. Shew how to determine the velocity of efflux for a given height of the surface.

10. Find the impelling force of a stream on a surface of revolution whose axis is in the direction of the stream. A solid cone whose S. G. is twice that of water, and whose semi-vertical angle is  $\sin^{-1}\sqrt{\frac{2}{3}}$  is just immersed in still water, with its vertex downwards and axis vertical and then let go. Find its velocity when it has sunk to a depth x below the surface.

## OPTICS, SPHERICAL TRIGONOMETRY AND ASTRONOMY.

- Examiner.—Mr. M. H. L. Beebee, B. A.
- 1. When a small plane area is illuminated by a pencil of rays emanating from a point, prove that the illumination at any point of the area varies directly as the cosine of the angle of incidence, and inversely as the square of the distance from the origin of light.

A candle is burning at a distance a from a wall of a room, on which is a plane vertical circular mirror, the centre of which is distant  $a\sqrt{2}$  from the candle. Show that the illuminated patch on the ceiling is an ellipse, and that at a certain point in its major axis, the illumination due to the reflected light is  $\frac{1}{2\sqrt{2}}$  of that due to the direct light of the candle.

2. A small pencil is obliquely refracted at a spherical surface: shew that the distances of the primary and secondary foci from the point of incidence of the axis are given by the formulæ,

$$\frac{\mu \cos^2 \phi'}{v_1} - \frac{\cos' \phi}{u} = \frac{\mu \cos \phi'}{r} - \frac{\cos \phi}{r}, \frac{\mu}{v_1} - \frac{1}{u} = \frac{\mu \cos \phi' - \cos \phi}{r}.$$

Find the caustic of a point from which rays are refracted at a plane surface, and illustrate by a diagram the pencils by which a stick is seen when immersed in water.

3. A ray passes through a medium, the value of  $\mu$  at any point of which is a function of r, the distance from a fixed point, find the equation to the path of the ray.

For example suppose  $\mu$  varies as  $\frac{1}{c^2 + r^2}$ , where c

is a constant.

4. What is the difference between excentrical and centrical refraction through a lens?

If a small pencil of light be incident obliquely and centrically on a thin lens, find the distances of the primary and secondary foci from the centre of the lens.

5. Describe the experiment in which the solar spectrum is analysed by means of a prism and a lens of small focal length. Shew that the condition for achromatism where a small pencil passes excentrically through two thin lenses separated by a given interval a is 0 = a

$$\frac{b_1 + a}{f_2} \frac{d \mu_2}{\mu_2 - 1} + \frac{b_1}{f_1 \mu_1 - 1} + \frac{d \mu_1}{f_1 f_2} \left( \frac{d \mu_1}{\mu_1 - 1} + \frac{d \mu_2}{\mu_2 - 1} \right)$$

where  $b_1$  is the distance from the centre of the first lens of the point where the axis of the incident pencil cuts the common axis of the lenses.

- 6. Enunciate and prove Napier's analogies connecting the sides and angles of a spherical triangle.
- 7. To what causes is due the inequality of the intervals of time between the sun's arrival at the meridian?

Discuss fully the nature of the inequality on the hypothesis of the earth's orbit being circular.

8. Give a brief description of the Transit instrument and of the errors to which it is liable. If  $\alpha$ ,  $\beta$ ,  $\gamma$  be the errors of collimation, level, and azimuth respectively, shew that the error of time in the transit of a star whose declination is  $\delta$  is  $\frac{\sec \delta}{15}$  ( $\alpha + \beta \cos (l - \delta) + l \cos (l - \delta)$ )

 $\chi \sin (l - \delta)$ ; l being the latitude of the observatory. Why is Ramsden's eye-piece used?

- 9. Define the first point of Aries. Explain how to determine its position, and state why the observations are made at the Equinoxes.
- 10. State how the aberration of light, and parallaxes respectively affect the true positions of a heavenly body. If  $\lambda$  be a star's latitude longitude L the sun's longitude, shew

that the aberration

in latitude is 
$$\frac{20''.45 \sin \lambda \sin (L-l)}{20''.45 \cos (L-l)}$$

11. Give Kepler's laws of planetary motion and determine the angle of elongation of an inferior planet when stationary, on the hypothesis of union motiform in circular orbits in one plane.

Define the longitude and the reduced longitude of a planet, and shew that it l' the reduced longitude l the longitude,  $\Omega$  the longitude of the node, i the inclination of the orbit to the ecliptic.

$$l' = l - \tan^{2} \frac{i}{2} \sin 2 (l - \Omega) + \frac{1}{2} \tan^{4} \frac{i}{2} \sin 4 (l - \Omega) - \&c.$$

12. Draw a diagram roughly representing the moon's path relative to the sun. What are her longitudinal librations? The mean period of corresponding librations is observed to be longer than the moon's mean sidereal period, and solar eclipses generally occur at intervals of less than six months; what conclusions can be drawn as to certain elements of the moon's orbit from these two facts?

## CHEMISTRY (ORGANIC).

Examiner.—MR. S. B. PARTRIDGE.

- 1. Point out the leading chemical peculiarities of organic substances as distinguished from inorganic, illustrating your answer by examples.
- 2. How is Oxalic Acid prepared, and what are its physical and chemical properties? With what group of organic substances is it closely allied, and what is the relationship?
- 3. How is Essence of Bitter Almonds prepared, and what are its properties and affinities? How do you account for its formation?

- 4. Enumerate the principal Alkaloids contained in Opium, and describe the mode of preparation of the two most valuable.
- 5. What is Glycerine, how is it prepared and what relation does it bear to the oils and fats?
- 6. Describe briefly the chemical composition and properties of the Blood.

#### CHEMISTRY (INORGANIC).

- . Examiner.—Mr. H. F. BLANFORD.
- 1. Trace the history of the theory of phlogiston. What did it attempt to explain, and how was it eventually dispelled?
- 2. Describe the quantitative analysis of a gas whose constituents are H. CO<sub>2</sub>. C<sub>4</sub> H<sub>4</sub>, N, and water vapour.
- 3. Describe the preparation of the less oxygenated compounds of Nitrogen by the direct decomposition of Nitric acid. Describe their physical characters.
- 4. Describe the different modes of assaying silver ores and alloys.
- 5. The following composition of two minerals is ascertained by analysis. What are their formulæ?

<b>A</b> .	В.
Co <sub>2</sub> :35,90	As46,76
Feo54,57	S17,34
Muo 1,15	Fe26,36
Cao 3.18	Co 9,01

6. On what principles have the equivalents of the elements been determined? Give examples; and instances in which the atomic weights of particular

elements have been changed, with the reasons for the change.

- 7. Give examples of isomorphism, isomerism and allotropy.
- 8. In the formation of HS, HCl, NH<sub>3</sub> and NO<sub>4</sub> how many volumes of the several elements unite, and what are the resulting volumes?
- 9. Convert the following formulæ into equivalent formulæ in which Silicic acid is regarded as SiO<sub>2</sub>.

A. 3 
$$\left\{ \begin{array}{ll} MgO \\ FeO \end{array} \right\}$$
 SiO<sub>3</sub>

B. 
$$MgO, SiO_3 + HO$$

C. 3 
$$\left\{ (\text{FeO}, \text{CaO})_{\mathfrak{s}} \text{SiO}_{\mathfrak{s}} \right\} + 2 \text{ Fe}_{\mathfrak{s}} O_{\mathfrak{s}}, \text{SiO}_{\mathfrak{s}}$$

#### ELECTRICITY.

## Examiner.—MR. H. F. BLANFORD.

- 1. On what fundamental facts do the contact and chemical theories of Voltaic electricity respectively rest?
- 2. How is the torsion electrometer used to measure an electrical charge?
- 3. Give an account of Faraday's experimental proofs of the identity of Voltaic and frictional Electricity.
- 4. What are electrics and dielectrics, paramagnetics and diamagnetics? Give examples, and shew how far the use of any of these terms originated in imperfect knowledge.
- 5. By what various means has the intensity of the earth's magnetism been measured?

- 6. What is meant by arbitrary and natural units of current and resistance? Describe the various means of ascertaining the resistance of a conductor in terms of either.
- 7. Describe the construction and principle of the Tangent Galvanometer.

#### ZOOLOGY.

#### Examiner.—MR. H. F. BLANFORD.

- 1. Describe the typical Mammal skeleton. Mention the chief variations, and also striking exceptions in the number and position of important bones presented by various animals.
- 2. Contrast the Placental and Aplacental sections of the Mammalia in important points of structure and development.
  - 3. Describe the typical vertebra as defined by Owen.
- 4. Give an abstract of Darwin's argument for the derivation of species by natural selection.
- 5. Give the distribution of the following animals, pointing out where the name denotes two or more species, and their respective range; and where the range has been increased by artificial means.

The Buffalo (Arnee). The Macaw.

, Hippopotamus.

.. Rhinoceros.

.. Dodo.

" Boa.

.. Emeu.

., Otter.

" Beaver.

" Ornithorhynchus.

9. Give a full description of any family you are best acquainted with, including diagnoses of genera, range, habit, &c.

#### COMPARATIVE PHYSIOLOGY.

Examiner.—MR. S. B. PARTRIDGE.

- 1. Describe the different varieties of Epithelium and point out the functions they perform in the animal economy.
- 2. In what animals do Salivary glands exist, what is their structure and what their use?
- 3. Describe minutely the structure and functions of the tubular nerve fibre.
- 4. Describe the leading peculiarities of the circulation of a young mammal prior to birth, and indicate the analogies between such circulation and that of certain fully developed animals of the Vertebrate group.
- 5. Give as full and complete a description as you can of the minute anatomy and functions of the kidney, pointing out the principal modifications of this organ met with in the animal kingdom.
- 6. What is an Intestinal Villus; what is its structure and what functions does it perform?

#### BOTANY.

Examiner.-Mr. S. B. PARTRIDGE.

Explain the meaning of the following terms.
 Accrescent.
 Circinate.
 Revolute.

Apocarpous.

Tomentose.

Bipartite.

Versatile,

- 2. Describe the structure of an orthotropous ovule, pointing out the relations of its several parts. What are the principal changes that occur in it after impregnation?
- 3. Describe the floral envelopes and organs of reproduction of an Orchidaceous Plant.
- 4. What is the commonly-received theory of respiration of plants, and what chemical changes are supposed to occur during the process?
- 5. Point out the advantages of a natural system of classification over the artificial system of Linnæus. On what principles must a natural classification be based? Give the characters of the higher groups according to some generally accepted natural arrangement.
- 6. Of the specimens on the table, numbered from 1 to 5, select any one or more, and give the various divisions to which they belong in any natural system down to the natural order inclusive.

# Premchand Roychand Studentship Examination, 1868.

#### ENGLISH LITERATURE AND COMPOSITION.

Examiner.-Rev. J. BARTON, M. A.

#### Poetry.

- 1. State what you consider to be the chief beauties and also the chief defects of the Faerie Queene. Coleridge remarks that Spenser displays great skill in harmonizing his descriptions of external nature and external incidents with the allegorical character of the poem. Adduce some remarkable instances of this.
  - 2. Render the following passages into plain prose-
  - (a) But th' Elfin Knight, who ought that warlike wage,

Disdained to loose the meed he wonne in fray.

- (b) The Red-Cross Knight toward him crossed fast To meet what mister wight was so dismayed.
- (c) He faire the knight saluted, louting low, Who faire him quited, as that courteous was.
- (d) Through unadvised rashness waxen wood.
- (e) Or let him die at ease that liveth here uneath.
- (f) A goodly golden chayne, wherewith yfere The virtues linked are in lovely wise.
- 3. What faults do Addison and Johnson find in Milton's great epic? Have later critics on the whole concurred in their judgment? Quote some of the foreign idioms which adorn or disfigure the poem.

### CXCVIII PREMCHAND ROYCHAND STUDENTSHIP.

- 4. Write a critical essay on any one of the following poems, with a brief introductory life of the author, and illustrated by quotations of any passages of especial beauty.
- (1) Lady of the Lake; (2) Lalla Rookh; (3) Childe Harold's Pilgrimage.
  - 5. " Next comes the dull disciple of thy school,
    - "That mild apostate from poetic rule,
    - "The simple Wordsworth, framer of a lay
    - " As soft as evening in his favourite May;
    - " Who, both by precept and example, shews
    - "That prose is verse, and verse is merely prose,
    - "Convincing all by demonstration plain,
    - " Poetic souls delight in prose insane;
    - "And Christmas stories, tortured into rhyme,
    - "Contain the essence of the true Sublime."

Who is the author of the above criticism? Discuss its justice, and state your own opinion as to the merits or demerits of Wordsworth's poetry. What, in his opinion, constitutes the proper style and diction of poetry?

- 6. By whom have the Knight's Tale, the Nonne Prestes tale, and the Merchant's Tale of Chaucer been reproduced and modernized, and with what success? From what sources were they respectively borrowed?
- 7. What political intrigues gave rise to the poem of Absalom and Ahithophel? What personages are the characters of Ahithophel, Zimri, Barzilkii, and Absalom, intended to represent?
- 8. Enumerate and give a brief outline of the several didactic poems of Dryden, Pope, and Johnson.
  - 9. Who were the several authors of (1) the Dun-

- ciad, (2) English Bards and Scotch Reviewers, and (3) Rejected Addresses? Give a full account of any one of them.
- 10. Name the authors of the following poems and arrange them chronologically according to the date of the authors' deaths.

Corsair—Alexander's feast—Evangeline—Prelude— Thalaba—Hind and Panther—Isles of Greece—Cooper's hill—Shepherd's Kalendar—The Campaign—Ancient Mariner—Polyolbion—Mirror for Magistrates.

- 11. Explain the allusions in each of the following passages, mentioning from what poem each is taken, and the name of its author.
  - (a) He left the name at which the world grew pale To point a moral or adorn a tale.
  - (b) Or call up him who left untold The story of Cambuscan bold.
  - (c) A man so various that he seemed to be Not one but all mankind's epitome; Stiff in opinions, always in the wrong, Was every thing by starts, and nothing long, But in the course of one revolving moon Was chemist, fiddler, statesman and buffoon.
  - (d) Three Poets, in three distant ages born, Greece, Italy, and England did adorn, The first in loftiness of thought surpassed, The next in majesty, in both the last. The force of nature could no further go, To make a third she joined the other two.
  - (e) Break not, O woman's heart, but still endure: Break not, for thou art royal, but endure,

Remembering all the beauty of that star Which shone so close beside thee, that it made One light together, but has past and leaves The Crown a lonely splendour.

- 12. Name the authors of the following passages, and specify if you can the particular poem from which each is taken.
  - (a) A little learning is a dangerous thing, Drink deep, or taste not the Pierian spring.
  - (b) Man wants but little here below, Nor wants that little long.
  - (c) 'Tis the sunset of life gives me mystical lore, And coming events cast their shadows before.
  - (d) Envy will merit, as its shade, pursue;
    But, like a shadow, prove the substance true.
  - (e) For manners are not idle, but the fruit Of loyal nature and of noble mind.
  - (f) Fame is the spur that the clear spirit doth raise
     (That last infirmity of noble minds)
     To scorn delights and live laborious days.
  - (g) Pygmies are pygmies still, though perched on Alps,

And pyramids are pyramids in vales.

- (h) Full many a flower is born to blush unseen And waste its sweetness on the desert air.
- (i) God made the country, and man made the town.
- (j) To me more dear, congenial to my heart, One native charm than all the gloss of art.
- $(k \rightarrow A \text{ thing of beauty is a joy for ever.})$
- (1) All that glitters is not gold. Merchants

- (m) To me the meanest flower that blows can give Thoughts that do even lie too deep for tears.
- (n) Faithful found Among the faithless, faithful only he.
- (o) His honour, rooted in dishonour, stood, And faith unfaithful kept him falsely true.
- (p) Alas! they had been friends in youth, But whispering tongues can poison truth, And constancy lives in realms above.
- (q) O woman! in our hours of ease,
  Uncertain, coy, and hard to please,
  And variable as the shade
  By the light quivering aspen made;
  When pain and anguish wring the brow,
  A ministering angel thou!
- (r) For woman is not undevelopt man
  But diverse; could we make her as the man,
  Sweet Love were slain; his dearest bond is this,
  Not like to like, but like in difference.
  Yet in the long years liker must they grow;
  The man be more of woman, she of man;
  He gain in sweetness, and in moral height,
  Nor lose the wrestling thews that throw the world;
  She mental breadth, nor fail in childward care,
  Nor lose the childlike in the larger mind;
  Till at the last she set herself to man
  Like perfect music unto noble words.
- (s) Lives of great men all remind us We can make our lives sublime, And departing leave behind us Footprints on the sands of time.

(t) Breathes there a man with soul so dead
Who never to himself hath said
This is my own, my native land;
Whose heart hath ne'er within him burned,
As home his footsteps he hath turned

From wandering on a foreign strand.

- (u) For Freedom's battle once begun, Bequeathed by bleeding sire to son, Though baffled oft, is never won.
- (v) Know then thyself, presume not God to scan, The proper study of mankind is man.
- (w) Knowledge and wisdom, far from being one, Have oft times no connexion; knowledge dwells In heads replete with thoughts of other men, Wisdom in minds attentive to their own.
- (x) Dim as the borrowed beams of moon and stars
  To lonely, weary, wandering travellers,
  Is reason to the soul; and as on high
  Those rolling fires discover but the sky
  Not light us here; so reason's glimmering ray
  Was sent, not to assure our doubtful way,
  But guide us upward to a better day.
- (y) Roll on, thou dark and deep blue ocean, roll, Ten thousand fleets sweep over thee in vain; Man marks the earth with ruin, his control Stops with thy shores; upon the watery main The wrecks are all thy deed, nor doth remain
  - A shadow of man's ravage, save his own,
    When for a moment, like a drop of rain,
    He sinks into thy depths with bubbling groan,
    Without a grave, unknelled, uncoffined, and unknown.

(z) How beautiful is night!

A dewy freshness fills the silent air;

No mist obscures; no cloud, no speck, nor stain,

Breaks the serene of heaven.

In full orbed glory yonder Moon divine Rolls through the dark blue depths.

Beneath her steady ray
A desert circle spreads,
Like a round ocean girdled with the sky,
How beautiful is night!

# ENGLISH LITERATURE AND COMPOSITION.

Examiner.—Rev. J. Barton, M. A.

### Prose.

- 1. Give a chronological list of the principal English prose writers and their chief works down to the year 1688
- 2. Name and give some account of the first romance and the first historical work in the English language.
- 3. "Bacon's mission was not to teach mankind philosophy, but to teach them how to philosophize." Explain this statement, and illustrate it by a brief outline of Bacon's philosophical system. Enumerate the various sources of error described by him in the Novum Organon, and by him called Idols.
- 4. What position does Milton take up in his Tractate on Education? Discuss the soundness of his views as applicable to the circumstances of modern times.

- 5. Upon what occasion and with what object in view were each of the following works written, and by whom?
- (1) Drapier's letters. (2) Areopagitica. (3) Letters of Junius.
- 6. Name the authors of the following works, and arrange them in chronological order.

Sentimental Journey—Robinson Crusoe—Rob Roy— New Atlantis—Pilgrim's Progress—Tale of a Tub— Religio Medici—Wealth of Nations—Rasselas—Apology for Smectymnus—Arcadia.

- 7. What English writer first popularized the essay as a form of literary composition? Write short biographies of the chief contributors to the Tatler, Spectator, Guardian, and Rambler.
- 8. Describe the origin of the modern Newspaper, and contrast the power it now exercises on society with that possessed by the ballad in mediaval times.
- 9. At what periods of English history did the events occur which are narrated in Ivanhoe, Kenilworth, Old Mortality, and the Heart of Mid Lothian? Give an outline of the plot of any one of them.
- 10. Paraphrase the following passages from Bacon's Essays, and write notes on the italicized words.
- (a) In great oppressions the same things that provoke the patience do withal mate the courage.
- (b) The mind of man is more cheered and refreshed by profiting in small things than by standing at a stay in great.
- (c) They that are glorious must needs be factious, for all bravery stands upon comparisons.

- (d) Simulation and dissimulation commonly carry with them a show of fearfulness, which in any business doth spoil the feathers of round flying up to the mark.
- (e) But certainly there are some that know the resorts and falls of business, that cannot sink into the main of it; like a house that hath convenient stairs and entries, but never a fair room: therefore you shall see them find out pretty looses in the conclusion, but are no ways able to examine or debate matters.
- (f) The proceeding upon somewhat conceived in writing, doth for the most part facilitate dispatch; for though it should be wholly rejected, yet that negative is more pregnant of direction than an indefinite, as ashes are more generative than dust.
- (g) Honour that is gained and broken upon another hath the quickest reflection, like diamonds cut with fascets; and therefore let a man contend to excel any competitors of his in honour, in out-shooting them, if he can, in their own bow.
- 11. Write explanatory notes on the following passages from Milton's writings, stating if you can from which of his works each passage is taken, and explaining fully any allusions to persons, or events, or books.
- (a) I cannot praise a fugitive and cloistered virtue unexercised and unbreathed, that never sallies out and seeks her adversary, but slinks out of the race, where that immortal garland is to be run for, not without dust and heat.
- (b) For although a poet, soaring in the high reason of his fancies, with his garland and singing robes about him, might without apology speak more of him-

self than I mean to do; yet for me sitting here below in the cool element of prose, a mortal thing among readers of no empyreal conceit, to venture and divulge unusual things of myself, I shall petition to the gentler sort it may not be envy to me.

- (c) For those actions which enter into a man rather than issue out of him, and therefore defile not, God uses not to captivate under a perpetual childhood of prescription, but trusts him with the gift of reason to be his own chooser.
- (d) And that which casts our proficiency therein (viz., Latin and Greek) so much behind, is our time lost partly in too often idle vacancies given both to schools and universities; partly in a preposterous exaction, forcing the empty wits of children to compose themes, verses, and orations, which are the acts of ripest judgment, and the final work of a head filled by long reading and observing with elegant maxims and copious invention.
- . (e) Lest I should take him for some chaplain at hand, some squire of the body to his prelate, one who serves not at the altar only, but at the court cupboard, he will bestow on us a pretty model of himself, and sobs me out half-a-dozen phthisical mottoes, wherever he had them, hopping short in the measure of convulsion fits; in which labour the agony of his wit having escaped narrowly, instead of well-sized periods, he greets us with a quantity of thumb-ring posies.
- (f) That grave and noble invention which the greatest and sublimest wits in sundry ages, Plato in Critias, and our two famous countrymen, the one in his 'Utopia,' the other in his 'New Atlantis,' chose I may

not say as a field, but as a mighty continent, wherein to display the largeness of their spirits, by teaching this our world better and exacter things than were yet known or used; this petty prevaricator of America, the zany of Columbus, (for so he must be till the world's end,) having rambled over the huge topography of his own vain thoughts, no marvel if he brought us home nothing but a mere tankard drollery.

## ENGLISH LITERATURE AND COMPOSITION.

# Examiner. - REV. J. BARTON, M. A.

### The Drama.

- 1. Point out the distinguishing characteristics of the classical and romantic drama, and illustrate your remarks by a comparison of any two well-known plays of each description.
- 2. What are the dramatic unities? How far are they observed by Shakespeare, Ben Jonson, Milton, and Addison respectively?
- 3. Who was the author of the Rehearsal, and against whom was it directed?
- 4. Trace with dates the rise and progress of thedrama in England down to the time of Shakespeare, and point out features in some of Shakespeare's plays which recal earlier efforts at scenic representations.
- 5. Enumerate the principal dramatic writers of the Elizabethan period. Wherein is it that Shakespeare shines so pre-eminently above all the rest?
  - 6. In what plays of Shakespeare do the following cha-

racters occur, and what parts do they play in the several dramas?

Iago—Faulconbridge—Bottom—Mercutio—Jessica—Macduff—Cordelia—Shallow—Dogberry—Adam—Sir Toby Belch.

- 7. State what you consider to be the true conception of the character of Hamlet.
- 8. Write explanatory notes on the following passages, commenting especially on the italicized words.
  - (a) I'd rather be a dog and bay the moon Than such a Roman.
  - (b) Half way down
    Hangs one who gathers samphire, dreadful trade!
  - (c) O for a falconer's voice

    To lure this tassel-gentle back again!
  - (d) He uses his folly like a stalking-horse, and under the presentation of that he shoots his wit.
  - (e) Hood my unmanned blood, bating in my cheeks.
  - (f) Letting 'I dare not' wait upon 'I would' Like the poor cat i' the adage.
  - (g) Cousins indeed, and by their uncle cozened Of comfort.
  - (h) Not poppy, not mandragora, Nor all the drowsy syrups of the world Shall ever medicine thee to that sweet sleep Which thou owedst yesterday.
  - (i) You cannot beg us, Sir, I can assure you, We know what we know.
  - (k) What maintenance he from his friends receives, Like exhibition shalt thou have from me.
  - 9. Render the following passage into simple prose;

"Time hath, my lord, a wallet at his back,
Wherein he puts alms for oblivion,
A great-sized monster of ingratitudes;
These scraps are good deeds past, which are
devour'd

As fast as they are made, forgot as soon
As done; perseverance, dear my lord,
Keeps honor bright: to have done is to hang
Quite out of fashion, like a rusty mail
In monumental mockery. Take the instant
way;

For honour travels in a strait so narrow Where one but goes abreast; keep then the path;

For emulation hath a thousand sons
That one by one pursue; if you give way,
Or hedge aside from the direct forthright,
Like to an entered tide, they all rush by
And leave you hindmost;
Or, like a gallant horse fallen in first rank,
Lie there for pavement to the abject rear,
O'er-run and trampled on; then what they do
in present,

Though less than yours in past, must o'ertop yours;

For time is like a fashionable host That slightly shakes his parting guest by the hand,

And with his arms out-stretch'd, as he would fly, Grasps in the comer; welcome ever smiles, And farewell goes out sighing."

- 10. Name the play of Shakespeare in which each of the following passages occurs; state by whom it is spoken, and explain any allusion to persons or events.
  - As I foretold you, were all spirits and
    Are melted into air, into thin air;
    And like the baseless fabric of this vision,
    The cloud-capp'd towers, the gorgeous palaces,
    The solemn temples, the great globe itself,
    Yea, all which it inherit, shall dissolve
    And, like this unsubstantial pageant faded,
    Leave not a rack behind.
  - (b) The poet's eye, in a fine frenzy rolling, Doth glance from heaven to earth, from earth to heaven;

And as imagination bodies forth

The forms of things unknown, the poet's pen

Turns them to shapes, and gives to airy nothing

A local habitation and a name.

- (c) The quality of mercy is not strained,
  It droppeth as the gentle rain from heaven
  Upon the place beneath. It is twice blest;
  It blesseth him that gives, and him that takes.
  - (d) She sat like patience on a monument, Smiling at grief.
  - (e) 'Tis the mind that makes the body rich,And as the sun breaks through the darkest cloudsSo honour peereth in the meanest habit.
  - (f) The better part of valour is discretion.
  - (g) Glory is like a circle in the water,
     Which never ceaseth to enlarge itself,
     Till by broad spreading it disperse to nought.

- (h) Men's evil manners live in brass;
  Their virtues we write in water,
- (i) Sweet are the uses of adversity, Which like the toad, ugly and venomous, Wears yet a precious jewel in his head.
- (k) There's a divinity that shapes our ends, Rough hew them how we will.
- (l) This is the state of man; to-day he puts forth The tender leaves of hopes; to-morrow blossoms,

And bears his blushing honors thick upon him; The third day comes a frost, a killing frost, And when he thinks, good easy man, full surely His greatness is a-ripening, nips his root, And then he falls, as I do.

- (m) Why, man, he doth bestride the narrow world Like a Colossus, and we petty men Walk under his huge legs, and peep about To find ourselves dishonourable graves.
- (n) Hear him discourse of commonwealth affairs, You would say it hath been all in all his study; List his discourse of war, and you shall hear A fearful battle rendered you in music; Turn him to any cause of policy, The Gordian knot of it he will unloose Familiar as his garter.
- (o) Good name in man or woman, dear my lord,
   Is the immediate jewel of their souls;
   Who steals my purse steals trash; 'tis something, nothing;

'Twas mine, 'tis his, and has been slave to thousands;

### CCXII PREMCHAND ROYCHAND STUDENTSHIP.

But he that filches from me my good name Robs me of that which not enriches him And makes me poor indeed.

### ENGLISH LANGUAGE.

Examiner.—REV. J. BARTON, M. A.

- 1. Compare carefully the English of the following passages, noting and explaining any peculiarities or changes of orthography, meaning, and construction.
  - (a) Wycliffe's Bible, A. D. 1389.

And he, openynge his mouthe, taugte to hem, sayinge; Blessid be the pore in spirit, for the kingdam in heuenes is heren. Blessid be mylde men, for thei shuln welde the eerthe. Blessid be thei that hungren and thristen rigtwisnesse, for thei shuln ben fulfillid. Blessid be thei that ben of clene herte for thei shuln see God. Blessid be pesible men, for thei shuln be clepid the sonys of God.

(b) Tyndale's Bible, A. D. 1526.

And he openned his mought, and taught them, saynge, Blessed are the poore in sprete, for theirs is the kyngdome off heven. Blessed are the meke, for they shall inheret the erth. Blessed are they which honger and thurst for rightewesnes, for they shall se God. Blessed are the pure in herte, for they shall se God. Blessed are the maynteyners of peace, for they shalbe called the chyldren of God.

2.

(a) Thus come lo Engelond in to Normandies hond, And the Normans ne couthe speke the bote hor owe speche,

- And speke french as hii dude at om & hor children dude also teche.
- So that heiemen of this lond, that of hor blod come,
- Holdeth alle thulke speche that hii of hom nome.
- Vor bote a man conne frenss, me telth of him lute.
- Ac lowe men holdeth to engliss & to hor owe speche yute.
- Ich wene ther ne beth in al the world coutreyes none,
- That ne holdeth to hor owe speche bote Engelond one.
- Ac wel me wot vor to conne bothe wel it is, Vor the more that a mon can, the more wurthe ho is. (Robert of Gloucester's Chronicle.)
- (b) Pilgrimes and palmers plihten hem togedres, Ffor to seche seint Jeme, and seintes at Roome. Wenten forth in heore wey with mony wyse tales, And hedden leve to lygen al heore lif tyme. Grete lobres and longe that loth weore to swynke, Clotheden hem in copes to bee knowen for brethren:

And summe schopen to hermytes, heore ego to have, I ffont there ffreres, alle the ffoure ordres, Prechinge the peple for profyt of heore wombes; Glosynge the gospel as hem good liketh. For covetyse of copes constructh hit ille.

For monye of this maistres mowen clothen hem at lyking,

### CCXIV PREMCHAND ROYCHAND STUDENTSHIP.

For monyeand hiremarchaundie meeten oft togedre. Seththe charite hath be chapmon cheef to shriven lordes,

Mony ferlyes han bifalle in a fewe yeres; But holy chirche biginne holde bet togedere The moste mischeef on molde mounteth up faste. (Vision of Piers Ploughman.)

- Give a literal rendering of the above in modern
   English.
- (2.) Write grammatical notes on the underlined words.
- (3.) Conjugate the verbs *tell*, *hold*, *be*, *can*, as used by writers of the first half of the 14th century.
- (4.) Divide the fines into their component feet, and point out any rythmical peculiarities.
  - 3. A morwe whan the day began to spring, Up rose our hoste and was our aller cok. And gaderd us togeder in a flok. And forth we riden a litel more than pas, Unto the watering of Seint Thomas; And ther our hoste began his hors arest, And saide; lordes, herkeneth if you lest. Ye wete your forword, and I it record. If even-song and morwe-song accord Let se now who shal telle the first tale. As ever mote I drinken win or ale. Who so is rebel to my jugement, Shal pay for alle that by the way is spent. Now draweth cutte, or that ye forther twinne. He which that hath the shortest shal beginne.
- (1.) Explain any words that may seem obscure in the above passage from Chaucer.

- (2.) Note in it any words that are not Saxon, mentioning from what languages they are severally derived.
- (3.) Point out any peculiarities in the grammar as compared with our present grammar.
- (4.) Who is it that describes Chaucer as "the well of English undefiled," and where? Has this opinion ever been called in question and with what justice?
- (5.) Remark briefly on the state of the English language in Chaucer's time, and state what you consider to have been his influence on the language.
- 4. It has been remarked by Muller; "The history of the Romance as well as of the Germanic languages shows in the clearest manner how a grammar once powerful and copious has been gradually weakened and impoverished until at last it preserves only a few fragments of its ancient inflexions."

Explain this statement and illustrate it in regard to the English language by (1) enumerating the chief grammatical changes which converted the Anglo-Saxon of the 10th into the English of the 14th century, and (2) by pointing out the 'few' fragments' of the old Anglo-Saxon inflexions which still exist in modern English.

- 5. Give the history of the now silent final e in certain nouns and verbs as hoste, preche &c. in common use by Chaucer, and show how it marks the natural growth and development of the language.
- 6. How do Anglo-Saxon nouns for the most part form their plurals, and how do you account for the final s as a sign of the plural in so many nouns of Anglo-Saxon origin? Discuss the etymology of the words alms and wishes and prove that these are singular forms.

7. Explain the origin of the final letters in the following words:

Mi-ne, thei-r, he-re, wh-y, who-se, dou-ble, a-m, tw-ain, also give the etymologies of such, which, since, and if.

- 8. What is the true origin of the so-called participial nouns in —ing? How did these nouns formerly lifter in form from present participles, and how may hey be distinguished now-? Explain such phrases as 'the house is a building."
- 9. Addison asserts that "the same single letter s on many occasions does the office of a whole word, and represents the his or her of our forefathers."

Is this a correct statement? What is the true origin of the apostrophe s as a sign of the possessive case?

10. Horne Tooke writes, "I believe they will be as little able to justify their innovation as Sir T. More would have been to explain the foundation of his ridiculous distinction between nay and no, and between yea and yes." What was the distinction made by Sir T. More, and are there any reasons for believing it to have been well founded?

Explain the origin of the affirmative and negative particles and compare them with the corresponding words in other Teutonic languages.

- 11. What light is thrown by the following passage on the former difference of usage in "thou" and "you?"
- "Taunt him with the license of ink, if thou thou'st him some thrice it shall not be amiss."—Twelfth Night.
  - 12. The following words have their etymologies

oncealed by the spelling, restore them to their orifinal forms so as to shew the origin of each—bran-new, sland, nostril, surgeon, buxom, court-cards, currants, whole, diamond, pigmy, scent, puny, fancy, wiseacre, rontispiece, afraid, righteous.

- 13. Give the etymological history of the following words; pagan—gossip—treacle—dunce—gazette—villain—lumber—sycophant—loadstar—esquire—manure—quaint—abandon.
- 14. In what senses, now obsolete, are the following words used by Shakspeare, Bacon and Milton? Fomtastical—fond—success—pestered—impale—-shrewd—allowance—battle—indifferent—regiment—-sad—-suggested—-inherit—addressed—merely—intend—eager—grain—siege.
- 15. Dryden takes Ben Jonson to task for general inaccuracy in his English diction, and as an instance, quotes a line from his "Catiline."

"Though heaven should speak with all his wrath at once" remarking that "heaven is ill syntax with his." Which was right, Ben Jonson or his critic?

16. The German philologist Grimm speaks of the English language as follows:

"Its highly spiritual genius and wonderfully happy development and condition, have been the result of a surprisingly intimate union of the two noblest languages in modern Europe, the Teutonic and the Romance. It is well known in what relations these two stand to one another in the English tongue, the former supplying in far larger proportions the material groundwork, the latter the spiritual conceptions."

Illustrate the above remark by quoting any passage (from 12 to 20 lines) of Shakspeare or Milton, and distributing the words which it contains according to their respective origin.

17. Enumerate a dozen pairs of words of cognate signification, the one of which has come to us directly from the Latin, but the other mediately through the French, as, for example, *sure*, *secure*. Which of the two forms is generally the oldest, and how is this to be accounted for?

### MENTAL PHILOSOPHY.

Examiner.—REV. J. D. DON.

- 1. Physiologists affirm the correlation of vital force, nervous force, and mental force. Expound this doctrine. Does it necessarily imply materialism?
- 2. Distinguish between Sensation and Sense-perception. Explain the difference between Perception as understood by Intuitionalists and by Sensationalists.
- 3. What are the Secundo-primary qualities of Hamilton's philosophy? How are they known? What distinction do we find in Aristotle, analogous to the modern distinction between Primary and Secondary qualities of body?
- 4. In developing his theory of our knowledge of the external world, does Mr. Mill really exhibit the genesis of the idea of Externality, or outness, as he proposes to do; or does he assume it? State your views.

- 5. Explain the doctrine of inseparable association. How does Mr. Mill use it in reference to what is called Necessity of Thought? Does he succeed in showing that the impossibility of disjoining ideas thus associated is identical with the impossibility implied in Necessity of Thought?
- 6. (a) Is the doctrine of the relativity of knowledge inconsistent with Natural Realism? Is it possible, with philosophic consistency, to maintain a direct presentative knowledge of certian qualities of body, and at the same time to deny the possibility of Absolute knowledge?
- Or, (6) Point out the Kantian elements which Hamilton has incorporated with the philosophy of Reid. Mention certain coincidences between Mill and Hume, which may, or might land the former in the Scepticism of the latter.
- 7. M'Cosh mentions three kinds of Intuitions. Explain his distinction, and point out what he holds to be the intuitive element in each.
- 8. Distinguish between the ultimate facts and the phenomena of Consciousness. How may the former be determined? Give an example.
- 9. What are the views of Brown, Hamilton, and Mill, on the subject of Causality? Your remarks are invited.
- 10. Sketch briefly the views of Plato, Hutcheson, and Jeffrey on the subject of Beauty.

### ETHICS.

## Examiner.—Rev. J. D. Don.

- 1. Explain the following Platonic ethical maxims; and show how they are grounded in Plato's view of the nature of the human soul. "No man is voluntarily evil." "All virtue is one." "Virtue cannot be taught"
- 2. How does Aristotle define Happiness, Virtue and Pleasure? What is Courage, viewed as a virtue; and how is it a virtue? Distinguish this from other kinds of courage.
- 3. How does Butler distinguish between private desires, benevolent, affections, self-love and conscience? In what respect did his doctrine as to the relation of self-love to the desires and affections oppose the tendency of previous ethical teaching, and lay the foundation of a sounder ethics?
- 4. For what phrase much used in morals are we indebted to Francis Hutcheson? Had it been used or suggested by any preceding writer? Sketch briefly the theory of Adam Smith. What seem to you the errors or defects of the sentimental school of moralists?
  - 5. What does Kant mean by the Autonomy of the Will? How does he show that this principle of Autonomy is the supreme principle of ethics? What distinction does he make between maxims and laws? Criticize Wayland's definition of law.
  - 6. What does Kant mean by the Practical reason, as distinguished from the Pure reason? What is the relation of the Practical reason to the Will? How is the reality of freewill, of immortality, and of the Divine existence established?

- 7. Cousin attacks the Kantian ethics in its fundamental principle, on the ground that it derives the idea of the good from obligation, instead of founding obligation on the idea of the good. Elucidate this difference between these philosophers.
- 8. Trace the connection between Mr. Mill's Metaphysics and his Morals. How are our moral judgments generated according to him? Criticize this account of their origin.
- 9. Is Utilitarianism capable of furnishing an account of our duties to God? If so, how? If not, why?
- 10. There are certain principles,—the sense of decency, or a regard for character, for example—which co-operate with our moral powers in influencing conduct. Mention some of them. Show how these contribute, as secondary principles, to the maintenance of social order.

## LOGIC.

### Examiner.—Rev. J. D. Don.

- 1. Give a brief account of the Organon of Aristotle; naming the books, and stating their chief contents. What has Formal Logic, as taught in modern times, added to that of Aristotle? Who were the Ramists; and what was their relation to the followers of Aristotle?
- 2. Transcendentalists charge the Aristotelian Logic with an empirical procedure. What do they mean? And what do they desiderate? Among those who admit that Logic must proceed on data empirically acquired, there is some difference of opinion as to its Pro-

vince. What is the view of Hamilton? and that of Mill?

- 3. State the Law of Consistency or Non-Contradiction. Explain it. State the three logical axioms evolved from that Law. Explain them; and show how they are applied.
- 4. Enunciate the Aristotelian law or canon of deductive reasoning (a) in comprehension, (b) in extension. Does Mill admit both kinds of ratiocination? Can you trace any connection between his new dictum and his sensational Metaphysics?
- 5. Where do we find the first mention of the distinction between Extension and Comprehension? How is it applied by Sir W. Hamilton to elucidate the theory of the Syllogism? What is Mr. Mill's position in regard to this distinction? You are invited to offer remarks on the subject.
- 6. What is the difference between the Progressive and the Regressive Sorites. Give an example of each. Extricate the syllogisms involved in the former, indicating the leading characteristics or rules of Sorites. Can the distinction between Comprehension and Extension be applied to this mode of argument?
- 7. State the nature of the presumption on which we proceed, when we ascend to a general truth from an incomplete induction. Mention some of the thinkers who, in later times, have developed and expounded the methods of real Induction. Have you any knowledge of the discussions that have arisen?
- 8. Why is the Nyâya called the "Indian Logic?" Give an account of what it calls "conclusive Knowledge;" and estimate the logic proper of the system.

## HISTORY OF PHILOSOPHY.

# Examiner.—REV. J. D. DON.

- 1. (a) The problem of the early Greek philosophers was the explanation of Nature. What solutions were proposed by the Ionic School, the Pythagoreans, and the Eleatics? Contrast the Eleatics and Heraclitus. Characterize Empedocles and the Atomists.
- Or 1. (b) Is it correct to speak of the Socratic philosophy, the Socratic system, the Socratic doctrine? Illustrate the Socratic method. Compare the Socrates of Xenophon with the Socrates of Plato. Which seems to be the more correct representation?
- 2. When and where did Neo-platonism flourish? Name some of its chief teachers. What features of the older Greek philosophy did it retain? What were the foreign elements, and whence did they come? Indicate some of the more notable affinities between this system and the age which gave it birth. It has been called the self-destruction of ancient philosophy. Can you suggest why?
- Sketch the history of the mediæval controversy 3. between Nominalism and Realism; indicating the attitudes of the leading figures.
- 4. Descartes is called the father or founder of modern philosophy-Why? Distinguish between the Cartesian doubt, and that of Pyrrhonism. Describe his procedure in laying the foundation of his system. In which of his works is the account to be found?
- 5. (a) What three philosophers in the age succeeding Descartes may be regarded as representatives of the

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philosophic movements known in modern times as Idealism, Realism, and Identity? Sketch the history of Sensualism in the 18th century.

- Or. (b) Mention certain philosophical and logical principles which are specially connected with the name of Leibnitz. Expound briefly the doctrine of preestablished harmony and the Law of Sufficient Reason.
- 6. Trace the course of modern German speculation, as marked by the names of Kant, Fichte, Schelling and Hegel.
- 7. What is Empiricism? The Germans charge British philosophy with empiricism, how far is the charge just? In what sense must the impossibility of excluding empirical elements be firmly maintained?
- 8. Illustrate the result of the absolute exclusion of empirical data by reference (a) to German, (b) to Indian speculation.

### POLITICAL ECONOMY.

## Examiner. - MR. GEORGE SMITH.

- 1. In what respects is the science of Political Economy inapplicable to countries like India, and why is it inapplicable in these respects? Is there any ground for believing that the data of the science are incomplete and its principles imperfect?
  - 2. State the principal Theories of Rent.
  - 3. Define accurately, and contrast sharply, the various systems of land tenure and assessment in India, giving the names of the authors of the systems of as-

sessment and the dates of their application to the different Provinces. Which system seems to you to be most in harmony with the local facts and most conducive to the general well-being, and why?

- 4. What is M. Bastiat's Theory of Value? Apply it to Rent, Wages, and Profit.
- 5. "Competition is only the absence of constraint."

  "No law attests more brilliantly the measureless superiority of the designs of God over the vain and power-less combinations of men." Prove, or refute, this. Is it true under all circumstances?
- 6. Under what conditions are combinations justifiable and advantageous.
  - (a) of Capitalists.
  - (b) of Labourers?
- 7. Explain, with illustrations, the relation of commerce to the fluctuations of Exchange, inland and foreign.
- 8. Define and contrast the ordinary principle of limited liability with that of partnership en commandite. In what countries is the latter in force: what objections have been brought against it?
- 9. Analyse the existing revenues of India, and show how far Indian taxation follows, or violates, the doctrines of European economists, from Adam Smith to Wilson and Mr. Gladstone.
- 10. State and criticize the system of any distinguished political economist, except Adam Smith.

# HISTORY OF ENGLAND AND INDIA.

## Examiner.—MR. GEORGE SMITH.

- 1. Give a succinct account of the Government, Laws and Institutions of the Anglo-Saxons.
- 2. Describe the policy and the proceedings either of Edward I. in Scotland or of Cromwell in Ireland. Contrast the treatment, character and present condition of the Scotch and Irish.
- 3. Contrast the relation of Elizabeth and of Mary to the Reformation, and the phases of the Reformation in England and Scotland.
- 4. Sketch the growth of the Cabinet system and of political parties in England, and state in chronological order the names of the successive Premiers, to the death of Lord Palmerston.
- 5. What authentic materials have we for the history of India up to the arrival of the English?

Give the names of contemporary annalists in all cases.

- 6. Trace the origin and spread of Buddhism, giving the approximate dates of its extension to the different parts of India, to Burmah and Ceylon. What is known historically or critically of the Jains?
- 7. Detail the career of Shere Shah and justify him against the charge of being a usurper.
- 8. Write a list of the Governors General of India in chronological order, including those who held office temporarily, and criticize the administration of any who ruled for at least five years,
  - 9. Sketch the rise, history and treaty engagements

with England of any one of the following Feudatories:-

Oodeypore.

Holkar.

Bhopal.

Travancore.

### HISTORY OF GREECE AND ROME.

Examiner.-MR. GEORGE SMITH.

- 1. What different forms of Government prevailed in Greece, and how did they generally succeed each other? Give illustrations from the history of the lesser States?
- 2. Trace the rise and causes of the supremacy of Athens, and state the causes of its ruin.
- 3. Write the life, and estimate the character, of any one of the following, giving dates—

Pausanias.

Brasidas.

Lysander.

- 4. State the principal events in the career of Alexander during the last twelve years of his life, with dates and geographical descriptions. What were his ultimate objects, and how were they realized? Whatattempts to carry out a similar policy have been made since his time, and why have they been more successful?
- 5. Sketch briefly the reigns, and their influence on civilization, of one of these two:—

The Seleucidae.

The Ptolemies.

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- 6. What are the arguments for and against the personality of the Kings of Rome, and the credibility of Roman History previous to the burning of the city by the Gauls? What reasons have been assigned for believing that the *Annales Maximi* survived the conflagration? Who are the leading authorities in recent times on both sides of the question?
- 7. Contrast the treatment of conquered nations and the government of conquered provinces by the Romans with the policy of Greece in ancient and of England, Russia and France in modern times.
- 8. Describe and contrast politically and geographically the constitution, influence and extent of the Government of Rome at any two of the following periods.

### HISTORY OF MODERN EUROPE.

- . Examiner.—Mr. George Smith.
- 1. How was the agricultural population of Europe affected by the invasion of the barbarians? What were the rights of its various classes under the feudal system?
- 2. From what events do we date the beginning and the end of the Holy Roman Empire? Trace the reciprocal influence of the Roman and Teutonic elements in its institutions and history.
- 3. What have been the results of the Empire on modern jurisprudence, on the ecclesiastical power and on the nationalities of Europe?

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- 4. Trace the progress of commercial improvement in Europe from the beginning of the twelfth century.
- 5. What influence had the reign of Louis XIV. on the French Revolution?
- 6. What led to the success of the Lombard and Tuscan Republics and their subsequent subjection to lords?
- 7. Sketch briefly the constitutional and territorial history of Spain from its conquest by the Saracens to the union of the two Crowns.
- 8. Give the leading facts in the history of the House of Commons and the development of Parliamentary Government.
- 9. On what grounds, historical and philosophical, has the opinion been defended, that Democracy is the ultimate tendency of all civilised peoples?

### PURE MATHEMATICS.

## Examiner.—MR. H. WOODROW, M. A.

1. Prove by a reference to the propositions that bear on the subject, that in Euclid the sole test of equality of area is capability of superposition.

Shew how two triangles, on equal bases and between. the same parallels, may be so divided, as to be capable of superposition.

2. Prove Euclid, Book I. Proposition 32, the angles of a triangle are equal to two right angles.

Give some other proof of this proposition. What convention about the angles must be adopted if the figure in the second corollary has re-entering angles like a

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thick letter L, that is like a rectangle, having a rectangle about its diameter taken away.

3. Prove Euclid, Book VI. Proposition 19; similar triangles are to each other in the duplicate ratio of their homologous sides.

Construct a triangle similar to a given triangle, and three times its area.

4. Solve the equations

$$x(x+y+z) - (y^2 + z^2 + yz) = a^2$$

$$y(x+y+z) - (x^1 + z^1 + xz) = b^2$$

$$z(x+y+z) - (x^1 + y^2 + xy) = c^2$$

5. If a, b, c, be in harmonical progression and n be a positive integer, show that

$$a^n + c^n > 2b^n$$

6. Assuming the Binomial Theorem to be true for a positive integral index, prove it for fractional and negative indices.

If the coefficient of the  $(p+1)^{\text{th}}$  term of an expanded binomial be r times the  $(p-1)^{\text{th}}$  term, find the index.

7. Prove the expansion

$$\log_e (1+x) = x - \frac{x^2}{2} + \frac{x^3}{3} - \&c.$$

And thence deduce the expansion

$$\log_{s}(x+1) \stackrel{\bullet}{=} 2 \log_{s} x - \log_{s}(x-1) - 2 \left( \frac{1}{2x^{2}-1} + \frac{1}{3} \left( \frac{1}{2x^{2}-1} \right)^{s} + \&c. \right)$$

Given  $\log_{10} 3 = .47712$  and  $\frac{1}{\log_{e} 10} = .43429$  apply

the latter series to calculate  $\log_{10}$  11. to five places of decimals.

8. If the whole number of persons born in any month is  $\frac{1}{480}$  of the whole population at the beginning of the month, and the number of those who die  $\frac{1}{600}$  find the number of years in which the population will be doubled.

Given  $\log_{10} 2 = .301030$ ;  $\log_{10} 6 = .778151$  and  $\log_{10} 7 = .845098$ .

- 9. A walks a certain distance to College in 1½ hours, starting between 8 and 8¾, B walks the same distance in 1½ hours, starting between 8 and 8¼. Find the chance that A may overtake B.
- 10. If  $\frac{p_{n-1}}{q_{n-1}}$ ;  $\frac{p_n}{q_n}$  be two consecutive convergents to a given fraction prove that

$$p_{n-1} q_n - p_n q_{n-1} = 1$$

Apply this proposition to find the integral values of x and y in the equation

$$ax + by = c$$
.

11. Prove the formulæ

$$2\cos A = \pm \sqrt{1 + \sin A} \pm \sqrt{1 - \sin 2A}$$

$$2\sin A = \pm \sqrt{1 + \sin 2A} \pm \sqrt{1 - \sin 2A}$$

Illustrate by a figure the reason for the four ambiguities of sign, and determine the signs to be given to the radicals, as A varies from 45° to 405°.

Sin  $378^\circ = \frac{1}{4} (\sqrt{5} - 1)$ , determine cos  $189^\circ$  and sin  $189^\circ$ .

12. Prove that  $\frac{\pi}{64800}$  gives the value of sin 10° correctly as far as 12 places of decimals, and shew how to calculate a table of sines for every 10°.

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13. Find the radius of an escribed circle of a triangle.

If  $\gamma_1$ ,  $\gamma_2$ ,  $\gamma_3$  be the radii of the three escribed circles which touch the sides a b c respectively of a triangle, shew that  $\gamma_1$ ,  $\gamma_2$ ,  $\gamma_3$  will be in harmonical progression when a, b, c are in arithmetical progression.

14. Prove De Moivre's theorem for a positive integral value of the index.

Find the general value of  $\theta$  which satisfies the equation.

$$(\cos \theta + \sqrt{-1} \sin \theta) (\cos 2\theta + \sqrt{-1} \sin \theta) (\cos 3\theta + \sqrt{-1} \sin 3\theta) \dots (\cos n\theta + \sqrt{-1} \sin n\theta) = 1.$$

15. Resolve  $x^{2n} - 2x^n \cos n \theta + 1$  into a series of quadratic factors.

Hence deduce that if  $2na = \pi$ .

$$1 = 2^{n-1} \sin \alpha \sin 3\alpha \sin 5\alpha \dots \sin (2n-1)\alpha.$$

A series of radii divide the circumference of a circle into 2n equal parts, prove that the product of the perdiculars let fall from any point of this circumference

on *n* consecutive radii = 
$$\frac{r^n}{2^{n-1}} \sin n\beta$$
, *r* being the ra-

dius and  $\beta$  being the angle between the radius to the given point and one of the extreme radii.

Candidates are at liberty to substitute any of the following for any of the preceding questions.

1. Compare the advantages and disadvantages of a decimal and duodecimal system of notation, as applied to weights and measures. Are there any advantages

in the division of a pound sterling into shillings and pence?

- 2. If a common knot be tied in a strip of paper of sufficient length, and having its long sides parallel, shew that the knot when drawn tight takes the form of a regular pentagon.
- 3. Shew how to abridge the multiplication and division of polynomials by the method of detached coefficients
- 4. For every logarithmic function, the principle of proportional parts fails both when the angles are small and when they are nearly right angles. Shew this in the case of the logarithmic sine, and give two methods by which the difficulty may be obviated.
- 5. Apply the multinomial theorem to find the coefficient of the 5th power of x in the expansion of

$$\left\{1 + \frac{x}{2} + \frac{1.3}{1.2} \left(\frac{x}{2}\right)^2 + \frac{1.3.5}{1.2.3} \left(\frac{x}{2}\right)^3 + &c.\right\}^4$$

## PURE MATHEMATICS.

# Examiner. - MR. H. WOODROW, M. A.

1. If a cone be cut by a plane, and two spheres be inscribed each touching the cone in a circle and the plane in a point, shew that the points of contact are the foci of the conic section, and that if the planes of the circles of contact be produced, they meet the cutting plane in two straight lines which are the directrices of the conic section.

How are the circle and parabola connected with the ellipse as regards the position of the spheres?

- 2. Two tangents to a parabola are inclined to one another at a given angle, and are of given lengths; shew how to construct the parabola.
- 3. Find the polar equation to the chord of an ellipse, the focus being the pole.

A polygon is inscribed in an ellipse, so that each side subtends the same angle at one of the foci, prove that if the alternate sides be produced to meet their points of intersection will be on a conic section having the same focus and directrix as the original ellipse, and that the chords joining consecutive points of intersection all subtend the same constant angle at the focus as the sides of the original polygon.

- 4. Prove the following method of drawing a tangent to a conic section at a point P. Through P draw two chords PC, and PD and through C and D draw lines parallel to PD and PC respectively intersecting the conic section in E and F. Join EF. A line drawn through P parallel to EF will be a tangent at P.
- 5. If the tangent at any point P of a hyperbola, cut the asymptote in T, and HP cut the same asymptote in Q then HQ = QT.
- 6. In the general equation to a conic section a x' + b x y + c y' + d x + e y + f = 0 however the origin and the direction of the rectangular coordinates are shifted, the quantities (a + c) and (4a c b') are not altered. Prove this, and shew when the curve has a centre, what geometrical relations are pointed out by this fact?
- 7. A straight line drawn through the intersection of two tangents to a conic section is divided harmonically by the curve and the chord of contact.

Shew that the equation  $x^{2n+1} - qx + r = 0$ has three real roots when

$$\left(\frac{q}{2^{\frac{n+1}{n+1}}}\right)^{2n+1} > \left(\frac{r}{2^n}\right)^{2n}$$

and apply the steps of the proof to shew that one of the roots of the equation

$$x^3 - 19 x + 30 = 0$$

lies between the limits of  $2\frac{1}{2}$  and  $-2\frac{1}{2}$ .

What is known by inspection respecting the roots of the equation

$$x^5 - 5 x^3 + 10 x - 50 = 0$$

Determine the number of its impossible roots.

Apply Sturm's Theorem to determine the nature of the roots of the equation

$$x^3 - 5 x^4 + 8 x - 1 = 0.$$

Shew that the roots are real in the "discriminating cubic"

$$(x-a) (x-b) (x-c) - f' (x-a) - g' (x-b) - h' (x-c) - 2fg h = 0.$$

12. Apply Horner's method of approximation to find the roots of the equation

$$x^{s} - 10 x' + 29.11 x - 22.26 = 0$$

Candidates are at liberty to substitute any of the following questions for any of the preceding.

Shew that the determinant

1. Shew that the determinant
$$\begin{vmatrix} x + ka^{2}, & w + k & ab, & v + k & ac \\ w + kab, & y + k & b^{2}, & u + k & bc \\ v + kab, & u + k & bc, & z + k & c' \end{vmatrix} = -k \begin{vmatrix} -\frac{1}{k}, & a, & b, & c \\ a, & x, & w, & v \\ b, & w, & y, & u \\ c, & v, & u, & z \end{vmatrix}$$

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2. If the minor of the determinant

$$\begin{bmatrix} a_1 & a_2 & \dots & a_n \\ b_1 & b_2 & \dots & b_n \\ \vdots & & \vdots \\ k_1 & k_2 & \dots & k_n \end{bmatrix}$$

made by omitting the term  $h_r$  with its line and column be devoted by  $H_r$ , then

$$\begin{vmatrix} A_1 & A_2 & \dots & A_n \\ B_1 & B_2 & \dots & B_n \\ \vdots & & & \vdots \\ K_1 & K_2 & \dots & K_n \end{vmatrix} = \begin{vmatrix} a_1 & a_2 & \dots & a_n \\ b_1 & b_2 & \dots & b_n \\ \vdots & & & \vdots \\ k_1 & k_2 & \dots & k_n \end{vmatrix}^{n-1}$$

prove this when n=3.

- 3. Prove Pascal's theorem that the three intersections of the opposite sides of any hexagon inscribed in a conic section, are in one right line.
- 4. Find the locus of the centre of a conic touching four straight lines.

#### PURE MATHEMATICS.

Examiner.—MR. H. WOODROW, M. A.

- If x, y, z be the rectangular, and r,  $\theta$ ,  $\phi$  the polar coordinates of a point, interpret the following equations
  - (1) f(x y) = 0(2)  $f(r \theta) = 0$

  - (3)  $f(r, \phi) = 0$
- Find the cosine of the angle between two lines, whose equations are given. Apply the expression to the lines

$$\begin{array}{l} a_1 x + b_1 y + c_1 z = 0 \\ a_2 x + b_2 y + c_2 z = 0 \end{array} \right\} \text{ and } \frac{x - a}{l} = \frac{y - b}{m} = \frac{z - c}{n}$$

- 3. Determine the equation to a plane, which contains one given line, and is parallel to another given line.
- 4. Define the hyperboloid of one sheet, and find its equation.

Deduce the equation to the asymptotic cone.

5. Find the locus of the middle points of a system of parallel chords in a surface of the second order.

Shew that the locus of the diameters of the ellipsoid

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1.$$

which are parallel to the chords bisected by the tangent planes to the cone  $\frac{x^i}{a^i} + \frac{y^i}{\beta^a} - \frac{z^i}{\gamma^i} = 0$ , is the cone

$$\frac{a^2 x^2}{a^4} + \frac{\beta^2 y^2}{b^4} - \frac{\gamma^2 z^2}{c^4} = 0.$$

- 6. Find the equation to an oblique circular cone, and shew that it has two systems of circular sections, and that one system of these plane sections makes the same minimum angle with the generating line that the other system does with it in another position,
- 7. Three straight lines mutually at right angles are drawn from the origin to meet the ellipsoid

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1.$$

Shew that if their lengths are  $\gamma_1$   $\gamma_2$   $\gamma_3$ 

$$\frac{1}{\gamma_{1}'} + \frac{1}{\gamma_{2}'} + \frac{1}{\gamma_{2}'} = \frac{1}{a'} + \frac{1}{b'} + \frac{1}{c^{a}}$$

8. Prove that the tangent plane at any point of the surface

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 $(a x)^2 + (b y)^2 + (c z)^2 = 2 (b c y z + c a z x + a b x y)$  intersects the surface a z y + b x z + c x y = 0 in two lines at right angles to one another.

- 9. Find the condition that a plane section of a central surface of the second order may be circular, and find the locus of the centres of circular sections in an ellipsoid.
- 10. Find the equation to the cone whose vortex is  $\alpha \beta \gamma$  which envelope the ellipsoid

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1.$$

- 11. State Napier's rules for the solution of right angled spherical triangles, and prove them in the case in which the complement of the hypothenuse is the middle point.
- 12. If three arcs of great circles intersect at right angles the sides BC, CA, AB of the spherical triangle ABC in P, Q, R prove that they all pass through the same point O, and that

$$\frac{\tan AP}{\tan OP} = 1 + \frac{\cos A}{\cos B \cos C}$$

$$\frac{\tan BQ}{\tan OP} = 1 + \frac{\cos B}{\cos C \cos A}$$

$$\frac{\tan CR}{\tan OR} = 1 + \frac{\cos C}{\cos A \cos B}$$

- 13. In a spherical triangle one angle and the middle point of the opposite side are joined by the arc of a great circle, find the length of the arc joining the two points. From the result deduce the length of the corresponding line in a plane triangle.
- 14. Prove that there are five regular solids, and five only.

Candidates are at liberty to substitute any of the following questions for any of the preceding.

- 1. If a sphere touch an ellipsoid and also cut it, the common section cannot be a plane curve unless the point of contact be one of four fixed points on the ellipsoid.
  - 2. Prove that the three surfaces

$$\frac{x^2}{a_1^2} + \frac{y^2}{b_1^2} = \frac{2z}{c_1}, \frac{x^2}{a_2^2} + \frac{y^2}{b_2^2} = \frac{2z}{c_2}, \frac{x^2}{a_3^2} + \frac{y^2}{b_{12}} = \frac{2z}{c_2}$$

will have a tangent plane if

$$\begin{vmatrix} a_1^2, a_2^2, a_8^3 \\ b_1^2, b_2^2, b_3^4 \\ c_1, c_2, c_8 \end{vmatrix} = 0$$

3. The condition that the general equation of the second degree

 $a x' + b y^2 + c z^2 + 2 a' y z + 2 b' z x + 2 c' x y + 2 a'' x + 2 b'' y + 2 c'' z + d = 0$  may represent a cone is that the determinant

$$\begin{vmatrix} a, c', b', a'' \\ c', b', a', b'' \\ b', a', c, c'' \\ a'', b'', c'', d \end{vmatrix} = 0$$

4. Find the general differential equation to developable surfaces.

#### PURE MATHEMATICS.

Examiner.—Mr. H. Woodrow, M. A.

1. Differentiate the expressions

$$\frac{(x-3)^4}{(x-1)^{\frac{3}{5}}(x+2)^{\frac{6}{2}}}, \cos^{-1}\frac{(1-3x)^4}{(1-x^2)^{\frac{3}{2}}}$$

2. If  $u = e^{ax} \cos bx$  shew that

$$\frac{du^n}{dx^n} = r^n e^{ax} \cos (bx + n\phi)$$

where 
$$\tan \phi = \frac{b}{a}$$
 and  $r = \sqrt{a^2 + b^2}$ .

3. Prove Lagrange's theorem, and apply it to the expansion of  $\sin y$  in powers of x where

$$y = z + x \sin y$$
.

4. Find the value of  $x^m \log x$  when x = 0 and eliminate the arbitrary functions  $f_1, f_2$  from the equation

$$u = f_1(x' + y') + f_2(x' - y^2).$$

5. Change the independent variables in

$$x \frac{d^2v}{dx^2} + y \frac{d^2v}{dy^2} + \frac{1}{2} \left( \frac{dv}{dx} + \frac{dv}{dy} \right)$$

from v and y to u and v where x + y = u and y = uv

- 6. Find the maximum value of the product  $x^a y^b$   $z^c \dots$  with the condition  $ax + \beta y + \gamma z + &c. = d$ .
  - 7. Trace fully the curve represented by

$$\sin y = m \sin x$$

and shew the changes as  $m > = \angle 1$ .

Trace the curve  $r' = a'' (\sec^2 \theta + \csc^2 \theta)$ 

- 8. Find the envelope of the curve which cuts off from the axes of rectangular coordinates segments Ox, Oy, Oz the sum of whose squares is constant.
  - 9. Integrate the differential coefficients

$$(\cos x)^3 (\sin 2 x)^3$$
 and  $\frac{5 x^3 + 1}{x^3 - 3 x + 2}$ 

10. A paraboloid of revolution and a right cone have the same base, axis and vertex, find the volume between them in terms of the volume of the sphere on the axis as diameter.

- 11. Find the intrinsic equation to a logarithmic spiral.
- 12. A sphere is pierced by a cylinder in such a manner that a diameter of the cylinder coincides with a radius of the sphere; find the volume and surface of the part of the sphere exterior to the cylinder.

Candidates are at liberty to substitute any of the following questions for any of the preceding.

1. Integrate the equation

$$\sqrt{1-c'\sin^2\psi} + \sqrt{1-c'\sin^2\phi} \frac{d\psi}{d\phi} = 0.$$

2. Writing  $\overline{/}$  (n) for  $\int_{0}^{inf.} dx e^{-x} x^{n-1}$  prove that  $\overline{/}$  (n+1) =  $n\overline{/}$  (n)

and 
$$\overline{/}(n)$$
  $\overline{/}(1-n) = \frac{\pi}{\sin n \pi}$ 

3. Prove that a singular solution of a differential equation of the first order and degree makes its integrating factor infinite, and that an exact differential equation has no singular solution.

Integrate the equations.

$$(y-a)\frac{d^3y}{dx^4} - \left(\frac{dy}{dx}\right)^2 + (y-a)^2 \cos x = 0$$

$$x^2 \frac{d^3y}{dx^4} + y \frac{d^3y}{dx^4} + \frac{n}{x} = 0$$

4. Give an account of any method of integrating linear differential equations with constant coefficients, and apply it to the example

$$\frac{d^3y}{dx^3} - \frac{dy}{dx^3} - \frac{dy}{dx^3} - \frac{dy}{dx} + y = \sin n x.$$

#### STATICS AND DYNAMICS.

#### Examiner.—MR. J. SUTCLIFFE, M A.

- 1. Assuming the parallelogram of forces to be true for the direction of the resultant, prove it to be true for the magnitude. The directions of two given forces are at right angles to one another, and pass through two given points: shew that the locus of the extremity of the line representing the resultant of the forces is a circle.
- 2. Three forces acting on a body keep it in equilibrium: shew that they must all lie in one plane and pass through a point or be parallel.

A rod of length 2a resting on a smooth peg has one end attached to a string of length l, the other end of which is tied to a fixed point above the peg: if a and  $\beta$  be the inclinations of the beam and string, respectively, to the horizon, shew that  $l \cos^2 \beta = a \cos^2 a \cos^2 a \cos (a-\beta)$ .

- . 3. A set of n pulleys A, B, C,.....are attached to a weight W: a string one end of which is fastened to the centre of a fixed pulley a, passes under A, over a, and carries a moveable pulley b; from the centre of b a string passes under B, over b, and carries a moveable pulley c: and so on, till the string which passes over the  $n^{tk}$  upper pulley supports a power P: shew that, neglecting the weight of the pulleys,  $W = P(3^n-1)$ .
- 4. State the laws of statical friction: and shew how the co-efficient of friction between two substances may be found practically.

Two weights of similar material connected by a fine

string rest on a rough vertical circular arc on which the string lies: prove that the angle subtended at the centre by the distance between the limiting positions of either weight is 2 tan  $-1\mu$ .

5. Explain what is meant by the centre of gravity of a system of heavy particles: and find its position when the weights and positions of the particles are known.

At each of n-1 of the angular points of a regular polygon of n sides a particle is placed, the particles being equal: shew that the distance of their centre of gravity from the centre of the circle circumscribing the polygon is  $\frac{r}{n-1}$ , r being the radius of the circle.

- 6. State how velocity and rectilinear acceleration are measured (1) when uniform, (2) when variable. A particle is moving in a straight line with a given velocity and is uniformly accelerated in that line: find its velocity and position at any time.
- 7. What are the laws which regulate the impact of imperfectly elastic bodies? Find the velocities after impact of two spherical balls which impinge directly upon each other with given velocities.

A number of equal spherical balls of the same elasticity are placed at rest with their centres in the same straight line: the first ball is made to impinge on the second, the second in consequence impinges on the third, and so on. If the velocities communicated to the balls by the impact form a geometrical progression, shew that the masses of the balls are also in geometrical progression.

8. A heavy particle is projected with a velocity v in a direction making an angle a with the horizon: find the path described by the particle, the velocity of the particle at any point, and the time in which it reaches the horizontal plane through the point of projection.

A plane AB, inclined at an angle a to the horizon, leads up to a horizontal plane BC; a particle is projected with a velocity v from A up the plane AB and falls upon the horizontal plane BC: if the times of motion from A to B and from B to C be equal, shew that

$$AB = \frac{2v^{3}}{g} \cdot \frac{\sin \alpha (1 + \sin^{2}\alpha)}{(1 + 2\sin^{2}\alpha)^{2}}$$

#### HYDROSTATICS AND OPTICS.

Examiner. MR. J. SUTCLIFFE, M. A.

. 1. Find the whole pressure of a fluid upon any surface immersed in it.

A parallelogram is immersed in a fluid with a diagonal vertical, one extremity of which is in the surface of the fluid. Through this point lines are drawn dividing the parallelogram into three equal parts, compare the pressures on these three parts: and if p, be the pressure on the middle part, and p<sub>1</sub>, p<sub>3</sub> those on the other two, prove that

$$16 p_a = 11 (p_1 + p_2)$$

2. If two fluids, which do not mix, meet in a bent tube, the heights of the free surfaces above the common surface are inversely as the densities.

Equal quantities of two fluids are placed in a cycloidal tube, placed with its axis vertical and vertex downwards; the height of the fluid in one branch is n times that in the other: find the ratio of the specific gravities of the fluids.

3. Define the term centre of pressure: and prove that if a plane area be immersed in a fluid, and then be turned about its line of intersection with the surface, its centre of pressure will remain unchanged.

The position of a parabolic lamina cut off by the latus rectum is immersed in water, the vertex being in the surface, and the latus rectum horizontal: shew that its centre of pressure is at a distance from the vertex equal to  $\frac{5}{28}$  of the latus rectum.

- 4. Define the term metacentre. If a solid of revolution float in a homogeneous fluid, determine the distance of its metacentre from its centre of gravity.
- 5. Find the number of images of a bright point which can be formed by reflection at two plane mirrors inclined at an angle, which is contained an exact number of times in two right angles.
- 6. Define the term geometrical focus. Diverging rays are incident on a convex spherical refracting surface: find the geometrical focus after refraction.

A sphere of glass is bisected by a plane reflecting surface: from a point in the diameter Lar to this plane, at a distance from the centre of the sphere equal to the diameter, diverging rays are incident on the sphere and reflected by the plane: find their geometrical focus after emergence.

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7. A small pencil of light is refracted through a prism, the axis of the pencil lying in a plane perpendicular to the edge of the prism: find the direction of the axis after refraction through the prism.

From a prism of glass, whose refractive angle is  $2 \tan \frac{-1}{4}$ , a prism is cut out: the edges of the prisms are in one plane, which is equally inclined to their bounding planes; shew that, if a ray, incident perpendicularly to one face of the exterior prism, emerges perpendicularly to the other, the refractive angle of the interior prism is  $2 \tan \frac{-1}{2}$ : the refractive index of glass being  $\frac{3}{2}$ .

- 8. Find a formula connecting the distances of a luminous point and its image with the focal length of the lens by which the image is formed.
- 9. What are the chief defects to which the image of an object, viewed through a telescope, is subject?

Describe Huyghen's eye-piece, and shew how some of these defects may be corrected by its use.

## GENERAL QUESTIONS.

### Examiner.—MR. J. SUTCLIFFE, M. A.

- 1. Any number of forces act at different points of a rigid body: find their resultants. What conditions must the forces satisfy, in order that they may be reducible to a single force.
- 2. Enunciate Guldinus' properties: and apply one of them to find the volume of the frustum of a right cone in terms of its altitude and the radii of its ends.

- 3. A particle is constrained to remain on a rough surface: find the condition of equilibrium. Shew that a heavy particle will be in equilibrium when placed on a portion of the rough surface, defined by the equation  $x \ y \ z = c^s$ , bounded by a curve which lies on a surface of revolution, the axis of z being vertical.
- 4. A particle is acted on by a central force: shew that the differential equation for determining the polar equation to its path is

$$\frac{d^2u}{d\theta^2} + u - \frac{P}{h^2u^2} = 0$$

A particle is projected at a distance a from a centre of force: the force is repulsive and of constant intensity  $\mu$ : the initial velocity is  $\sqrt{2\mu a}$ , and the particle starts from an apse. Determine the orbit.

- 5. A particle is projected vertically upwards with a given velocity, and the resistance varies as the square of the velocity: find the time of ascent and the time of descent.
- 6. A particle is constrained to move along a plane curve under the action of forces whose resolved parts along and perpendicular to the radius rector are P and
- Q. Prove that  $v^2 = 2\int (Pdr + Qr d\theta)$  and that the pres-

sure on the curve is given by  $R = \frac{v^*}{\rho} + P \frac{p}{r^*} - Q \frac{dr}{ds}$ ; where p is the perpendicular on the tangent from the origin and  $\rho$  the radius of curvature.

7. Investigate the equation of fluid equilibrium.

$$\frac{dp}{\rho} = Xdx + Ydy + Zdz$$

Density varies as (depth)<sup>2</sup>. A semicircle is immersed in fluid and divided into three equal sectors: shew that the pressure on the two anterior sectors is to that on the middle sector as 5 to 11.

8. Investigate the equation of continuity in Hydrodynamics.

$$\frac{d(\rho u)}{dx} + \frac{d(\rho v)}{dy} + \frac{d(\rho w)}{dz} + \frac{d\rho}{dt} = 0$$

Under what circumstances can this equation be reduced to the form

$$\frac{d^3 \phi}{dx^3} + \frac{d^3 \phi}{dy^3} + \frac{d^3 \phi}{dz^2} = 0$$

- 9. Explain the formation of focal lines when a small oblique pencil is reflected at a spherical surface or refractive at a plane or spherical surface.
- 12. Explain what is meant by the dispersion of light. How is the dispersive power of a medium measured? what is the irrationality of dispersion?

If a pencil of light pass centrically with small obliquity through two thin lenses in contact, shew that the condition of achromatism is

$$\frac{d\mu_{1}}{\mu_{1}-1} \quad \frac{1}{f^{1}} + \frac{d\mu_{2}}{\mu_{2}-1} \quad \frac{1}{f_{2}} = 0$$

#### NEWTON AND ASTRONOMY.

Examiner.—Mr. J. Sutcliffe, M. A.

1. Enunciate and prove Lemma IV.

Apply the Lemma to shew that the volume of a paraboloid cut off by a plane perpendicular to the axis is half that of the circumscribing cylinder.

- 2. Prove that the acclerating effect of a force under the action of which a body moves in a central orbit is measured by the ultimate value of  $\frac{2 \text{ QR}}{T}$ , QR being the subtense parallel to the direction of the force at P of the arc P Q described in the time T. Deduce the equation  $V^2 = \frac{1}{2} F$ . P V.
- 3. If the accleration of a moving point tend to a fixed point, and vary inversely as the square of the distance from that point, prove geometrically that the path of the moving point will be a conic section of which the fixed point is a focus.
- 4. Describe the construction and use of the Transit Instrument. To what errors of adjustment is this Instrument liable.
- 5. The altitudes of a star when it crosses the meridian of a place and the vertical plane at right angles to the meridian are a and a: shew that if  $\delta$  be the declination of the star and l the latitude of the place

$$\cot \delta = \sec \alpha \csc \alpha' - \tan \alpha$$

$$\cot l = \tan \alpha - \sec \alpha \sin \alpha'$$

- 6. Account for the changes is the length of the day at a place of given latitude. To what is twilight due? Find the lowest latitude in which twilight lasts all night. Why is the mean duration of twilight shorter at the equator than elsewhere, and when is its duration there shortest?
- 7. Shew how the apparent place of a star or planet is affected by aberration.

If a be the R. A. of a star,  $\delta$  its declination,  $\lambda$  the Sun's longitude,  $\omega$  the obliquity of the ecliptic, A the

coefficient of aberration,  $\Delta a$  and  $\Delta \delta$  the aberration in R. A. and declination, shew that

$$\Delta a = -\frac{A}{\cos \delta} \left\{ (\sin \lambda \cos \alpha + \cos \lambda \cos \alpha \cos \omega) \right\}$$

$$\Delta \delta = -A \left\{ (\sin \lambda \cos \alpha - \cos \lambda \sin \alpha \cos \omega) \sin \delta \right\}$$

$$+ \cos \delta \cos \lambda \sin \omega$$

- 8. Explain the causes of the equation of Time. Determine during what parts of the year the equation of time arising from the Sun's elliptic motion is additive or subtractive.
- 9. Explain what is meant by Precession and Nutation. Find the precession in R. A. and N. P. D. of a given star.
- 10. Describe the apparent path of the Moon with reference to the Earth and Sun, shewing by a figure the direction of the curvature of its absolute path: and shew how many Lunar Eclipses can occur in a year. Find the time, magnitude, and duration of a Lunar Eclipse.

#### CHEMISTRY.

Examiner.—F. N. MACNAMARA, M. D.

- 1. How may ozone be prepared? What views have been taken of the nature of that body, and by what arguments have they been supported?
- 2. How may the composition by volume of the following gases be determined.

Protoxide of Nitrogen, Carbonic oxide, Cyanogen, Ammonia.

- 3. How may zinc, copper, lead and silver be detected n an alloy of those metals, and by what processes may he proportion of silver in the alloy be estimated?
- 4. By what methods may the sulphur, phosphorus, phlorine and nitrogen in an organic body be detected, and in what way may the nitrogen be quantitatively determined?
- 5. Mention the various useful substances which can be obtained from the secondary products of the coal gas manufacture, and shew the relation which can be traced between any of them. From which of them, and how is aniline prepared?

# ELECTRICITY AND GALVANISM. Examiner.—F. N. MACNAMARA, M. D.

- 1. Describe the construction of the electrical condenser, and explain the principle on which it is used for the detection of minute charges of electricity.
- 2. Describe and account for the phenomena that ensue on making contact between a plate of platinum, and a plate of amalgamated zinc immersed in dilute sulphuric acid.
- 3. Describe, and explain the process of electro-plating.
- 4. State the laws of angular currents, and describe any experiment by which they may be demonstrated.
- 5. By what experiments can the resemblances between static and voltaic electricity be demonstrated?

#### THERMOTICS.

## Examiner.-F. N. MACNAMARA, M. D.

1. Describe the process for filling and graduating a mercurial thermometer, with the precautious necessary to ensure perfect accuracy.

- 2. How may the Dew-point be determined, and how may it be applied to finding the proportion of aqueous vapour in the air?
- 3. State the principal views that have been entertained of the nature of heat, and mention the phenomena which chiefly support, or oppose each view.
- 4. Explain the construction of the thermo-multiplier, and the mode of its application to the determination of the diathermacy of bodies.
- 5. What reasons have we for believing that differences exist amongst the heat-rays emitted by a calorific source?

# HISTORY AND PHILOSOPHY OF PHYSICAL SCIENCE.

#### Examiner.—F. N. MACNAMARA, M. D.

- 1. State the leading arguments for and against the Atomic Theory in its original form, and as propounded by Newton. How may Dr. Dalton's atomic hypothesis be applied to the explanation of the laws of combination which he propounded? State the distinction that is now commonly made between the terms "elementary atoms" and "elementary molecules," and mention the considerations which have led to the distinction.
- 2. Sketch the history of the Phlogiston and oxygen theories. Who were the philosophers by whose researches the latter theory became established, and what were the arguments they adduced in its favor?
- 3. Describe the successive improvements that have been contrived in the construction of the galvanic battery, and explain the object of each.
- 4. On what grounds is Chemistry ranked amongst the Inductive Sciences?

# L. M. S. and M. B. First Examination, 1868.

#### ANATOMY.

Examiner.—S. B. Partridge, F. R. C. S.

## Morning Paper.

- 1. Describe the Temporal Bone, giving exact details of the attachments of ligaments and muscles.
- 2. Point out the leading peculiarities of the sternoclavicular articulation, and show their bearing upon the functions which the joint is called upon to perform.
- 3. Supposing the Right Common Iliac Artery to be mechanically obstructed, through what channels would the circulation in the corresponding lower limb be carried on?
- 4. Describe fully the various steps of a dissection for the purpose of exposing the trunk and branches of the Obturator Nerve.

#### Afternoon Paper.

- 5. Describe the position and relations of the Internal Iliac Artery and the distribution of its principal branches.
- 6. What great nerves are situated near the root of the tongue, and what relations do they bear to each other and to the lingual muscles and vessels?
- 7. Describe fully the 4th ventricle of the brain, and give as exact an idea as, you can of the position and nature of the communication between it and the rest of the ventricular cavity.

8. Describe, in the order in which they would be met with in a dissection, all the structures contained within the middle third of the thigh.

#### COMPARATIVE ANATOMY AND ZOOLOGY.

Examiner.—J. A. Purefoy Colles, M. D.

## Morning Paper.

- 1. Describe briefly the characters of the Sub-Kingdom Cælenterata, and of the two great classes into which it is sub-divided. Enumerate the orders in each class (ordinal characters not required).
- 2. Describe briefly the Respiratory, Circulatory, and Digestive Systems of the class Lamellibranchiata. To what other class of Mollusca are the Lamellibranchiata most nearly allied?
- 3. Into what two great primary sections may the Vertebrata be divided, and how may these again be sub-divided? In what manner do Mammals differ from all other "Vertebrata, as regards their blood, skeleton, and reproductive organs?
- 4. Write down the dental formula of the Pig, the Dog, and Man. State how the dentition of Man differs from that of all other Mammals now extant.

# Afternoon Paper.

- 5. In what respects do Birds and Reptiles resemble each other and differ from other Vertebrata?
- 6. What classes of Mollusca are grouped together under the title *Odontophora*, and what character do they possess in common?

- 7. Describe the characters of the class Myriapoda.
- 8. What are the general characters of the skeleton n Artio-dactylate Mammals; and how do they differ rom those of the skeleton in Perisso-dactylate Mammals?

#### PHYSIOLOGY AND GENERAL ANATOMY.

# Examiner.—J. A. Purefoy Colles, M. D.

## Morning Paper.

- 1. Describe the red corpuscles of the human blood, giving their dimensions. What purposes are they supposed to fulfil, and what are the principal theories as to their origin?
- 2. Describe the minute structure of the following tissues:—1, Cartilage;—2, Fibro-cartilage;—3, Dentine;—4, Enamel.
- 3. What is meant by "germinal matter" as distinguished from "formed material"? Give examples of each as they occur in the following tissues:—1, Striped muscular fibre;—2, Capillary blood-vessels;—3, Epithelium.
- 4. Of what tissues are serous membranes composed? Enumerate the different kinds of serous membranes, and state in what respects they differ from each other?

#### Afternoon Paper.

5. What is the "vital capacity" of the thorax in a healthy adult man of average height? How is the vital capacity affected by differences in height, and how is it measured?

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- 6. What forces, besides the heart's action, promote or retard the circulation of the blood through the arteries, veins, and capillaries respectively? Describe the character of the pulse as traced by the sphygmograph, and state how that character will be affected by increased and by diminished arterial tension.
- 7. How is respiration affected by—1, Variations of temperature;—2, Exercise;—3, Seasons of the year;—4, Food or fasting.
- 8. State also what are the effects of alcohol, and of liquors containing alcohol, on the elimination of carbonic acid from the lungs.

#### MATERIA MEDICA.

#### Examiner.—T. ANDERSON, M. D.

#### Morning Paper.

- 1. Give the Botanical source and distinctive characters of the Cinchona Barks of the British Pharmacopæia, and mention their physical and therapeutical qualities and their chemical composition.
- 2. Describe the chemical composition and distinctive characters of quinine, quinidine, and cinchonine, and state what you know of the manufacture of Sulphate of quinine, the tests of its purity, and the mode of detecting the adulterations with the sulphates of cinchonine and quinidine.
- 3. Enumerate the officinal preparations of Iron, and mention the principal diseases for which they are prescribed, and state the usual dose of each.

4. Write a prescription for a tonic mixture, to contain 8 ounces, for a patient suffering from Dyspepsia, accompanied by an alkaline condition of the urine.

#### Afternoon Paper.

- 5. Enumerate the officinal alkaloids, give the names of the plants or the drugs from which they are obtained, and describe the distinctive characters, physiological and therapeutical action, and the usual dose of each.
- 6. What are the principal diaphoretics used in medicine? Mention the source and the officinal preparations (with the dose) of each. In what diseases would you prescribe diaphoretic remedies?
- 7. What are the therapeutical actions and the usual doses of the following medicines:—

Pulv. Ipecae. C. Opio.—Tinct. Hyoscyam.—Potass. Acet —Pil. Plumb. C. Opio.—Liq. Ammon. Acet.—and Pulv. Kino. C. Opio.

#### BOTANY.

# Examiner.—T. Anderson, M. D.

#### Morning Paper.

- 1. Describe fully what is meant by the term pentastichous in phyllotaxy; explain the fraction which is employed to distinguish that term, and how the figures of the fraction are obtained.
- 2. Distinguish between free and confluent fruits; give the names and distinctive characters of the primary and secondary divisions of free fruits, with an example of each division.

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- 3. Describe the specimens numbered from 1 to 4 so far as they possess characters referred to in the following formula:
  - g-Stem = general character.
  - Leaves = arrangement.
  - c Stipulation.
  - d Form.
  - f Margin and incision.
  - g Venation.
  - h Inflorescence general character.

Flower. Peculiarities of Calyx.

Do. of Corolla.

Do. of Stamens.

Pistil as to or any style and stigma.

Give the sub-class and natural order of each specimen.

### Afternoon Paper.

- 4. Describe the modifications in the relative position of the parts of the ovule, and state the botanical term applied to each modification.
- 5. Describe the nature of the inflorescence of a plant of the natural order Composite. What are the sub-orders of this family, and on what characters are they founded?

#### CHEMISTRY.

Examiner.—F. N. MACNAMARA, M. D.

1. Explain the nature of flame, and state the conditions necessary to its existence. How is an ordinary

flame modified, and with what intention by the use of the blow-pipe?

- 2. Describe the arrangements for electro-plating, and trace the changes which occur throughout the circuit when a Daniel's battery is in use in the process.
- 3. State the action of strong nitric acid upon the following bodies:—

Carbon. Antimony.
Sulphur. Arsenic.
Selenium. Copper.
Iodine.

- 4. By what means may the salts of Ammonia, Magnesia, Iron, Mercury, in solution be recognised? Write in symbols the reactions which occur on the application of the test-fluids to each solution.
- 5. Describe and explain the process for the volume-tric determination of Iron, and explain the action of the reagents which are used to bring a per-sult of iron in solution to the state of proto-sult.
- 6. State the processes which may be employed for the determination of the combining weights of the following bodies:—

Oxygen. Fluorine. Carbon. Ammonia.

Phosphorus. Hydrochloric Acid.

7. Name and give the composition of the bodies which result from the action of strong sulphuric acid, aided by heat, on alcohol; how may they be obtained in a pure state? what relation do they bear to one another?

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- 8. How is fulminate of mercury prepared? What chemical changes occur during the preparation? How may the connection between the fulminates and the cyanogen compounds be shown?
- 9. How is carbolic acid prepared; in what relation does it stand to Aniline and Picric acid, and how may those bodies be obtained from it?
- 10. Name and state the composition of the minerals on the table.

### L. M. S. and M. B. Second Examination, 1868.

#### MIDWIFERY.

Examiner.-J. EWART, M. D.

#### Morning Paper.

- 1. What are the reliable symptoms and signs of Pregnancy?
- 2. What are the circumstances and conditions under which the Casarian section is justifiable? Describe the mode in which the operation should be performed.
- 3. What precautions are absolutely necessary, on the part of the nurse and accoucheur, for the safe management of a natural labour?
- 4. Describe the minute structure, functions, and uses of the placenta.

### Afternoon Paper.

- 5. Describe the four principle presentations of the feetal head at the brim of the pelvis.
- 6. What are the leading causes of mortality among women during and after parturition? What are the means which might be adopted for the prevention or diminution of a large portion of this mortality?
- 7. What is your opinion of the value of the forceps in obstetric practice? Under what circumstance is the application of the forceps indispensably necessary?
- 8. Describe the position of the child in the various forms of transverse presentations, and the operative measures demanded equally for the safety of the child and mother.

#### MEDICINE.

### Examiner .- J. EWART, M. D.

#### Morning Paper.

- 1. Describe the signs of a tubercular diathesis, and the special points of difference between the course and terminations of phthisis among natives of India, as compared with the progress and results of the disease among the inhabitants of temperate climates.
- 2. Describe the phthological anatomy of red and white softening of the Brain.
- 3. What are the symptoms, diagnosis, prognosis, and treatment of acute inflammation of the spinal cord?
- 4. What are the indications of treatment in acute desquamative nephritis, hepatitis, and pneumonial

## Afternoon Paper.

- 5. A patient swallows a quantity of strong sulphuric acid. What are the succeeding symptoms, probable pathological results and prognosis? What line of treatment would you adopt in such a case? State the reasons upon which your treatment is based.
  - 6. How do you distinguish pleurisy from pneumonia; endocarditis from pericarditis; atrophy from hypertrophy of the heart; regurgitant disease of the aortic semilunar valves from that of the mitral valves?
  - 7. What are the immediate causes of death during the collapsed stage of cholera; and at any time after the stage of reaction has become established?
  - 8. How is the drinking water of the community in India liable to be polluted? What are the most approved means to be adopted for its purification?

## SURGERY.

#### Examiner.-J. FAYRER, M. D.

- 1. Describe the various forms of ulceration and their treatment. Let your account involve a description of the Pathology of ulceration, and also of the mode in which repair is effected.
- 2. What are the distinctive characters of the socalled Malignant Tumours? Describe their pathology. the symptoms, and treatment that you would have recourse to, and give your views as to the prognosis in the differ at forms of the disease, and how far it is influ-

enced by surgical treatment or other therapeutic measures.

- 3. Describe the symptoms of a strangulated Inguinal Hernia, and how it is caused. Distinguish carefully between the direct and oblique forms of Inguinal Hernia, and let your account involve a very accurate description of the anatomical arrangement of the parts concerned, not only in the disease, but also in the treatment. In the event of an operation being requisite, state your views as to the advantage or disadvantage of opening the sac, and describe accurately the steps of the operation and your subsequent treatment.
- 4. What are the present and prospective dangers of wounds of the scalp involving injury of the Pericranium and contusion of the subjacent bones? Describe the symptoms indicating the advent of unfavourable conditions. What would you do for their relief, and what pathological changes may be looked for in unfavourable cases?
- 5. In what cases is the actual cautery indicated and in what circumstances would you apply it?
- 6. Describe the phenomena and treatment of the various forms of Iritis.

## MEDICAL JURISPRUDENCE.

## -Examiner.-F. N. MACNAMARA, M. D.

1. Enumerate the signs of death, state the order in which they appear, and the indications to be drawn

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from their presence or absence of the time that has elapsed since death occurred.

- 2. Mention the more common causes which may render a wound indirectly fatal, and state to what extent any unhealthy conditions of the body prevalent in this country may conduce to them.
- 3. State the post-mortem appearances in case of death occurring during the collapse of cholera. How far might they be simulated by death due to any poison, and on what appearances would you rely for distinguishing between the two cases?
- 4. Name the substances on the table, and state which of them may be reckoned poisonous; state also, as regards those that are so, the dose in which they would prove fatal: 1st, to an adult; 2nd, to a child one year old. State also the prominent symptoms each would cause when taken in a full dose.
- 5. Mention the colouring matters in common use in this country which might cause stains resembling those of blood, and detail the tests which you would use to ascertain the real nature of such stains.

# Monor Examination, 1868.

#### MEDICINE.

# Examiner.-J.\* EWART, M. D.

- .1. Describe the different kinds of internal intestinal obstruction. How do you diagnose them from each other? Give full details of the treatment you would employ in such cases.
- 2. Give a detailed account of the pathology, diagnosis and treatment of Heat Apoplexy or Coup de Soleil. Explain the rationale of the treatment adopted by you.

# MIDWIFERY.

# Examiner .- J. EWART, M. D.

- 1. Describe minutely the pathology of ovarian cysts, their subjective and objective symptoms; their diagnosis, therapeutical and surgical management.
- 2. Write an elaborate essay on the subject of vaccination. Let it embrace a consideration of the vaccine lymph: the best means to be employed for its preservation and renewal; the operation of vaccination; the progress, maturation and decay of the vaccine vaccine and the physiological effect the process is supposed to produce on the blood in the prophylaxis, or mitigation of Small Pox.

#### SURGERY.

#### Examiner.—J. FAYRER, M. D.

- 1. What is meant by the "antiseptic principle" in the treatment of surgical disease? Describe its application and give an account of the class of cases in which it may be expected to prove beneficial. Let your description involve not only the "modus operandi" of the antiseptic, but also the pathological conditions, which by its application you hope to avoid.
- 2. Describe the chief sources of danger to life after great surgical operations. Give an account of the pathology of the morbid conditions, and say what may be done to avert or remove them by hygienic or therapeutic measures.
- 3. Describe Pharyngotomy; give an exact anatomical account of the steps of the operation and the circumstances under which it may be necessary.
- 4. Describe the appearances, as seen with the Crithalmoscope, of the various forms of Atrophy of the Optic Papilla, and the relation they bear to intracranial discrete.